

NATIONAL FISHERMAN

MAY
1956



Fishing for
just the right rope?

See Columbian ...world's most complete line of natural and synthetic ROPE and TWINE

Listed below are some of the natural and synthetic ropes and twines in Columbian's wide range of fishermen's cordage. These are "stock" items, available from your dealer's shelves or easily secured. There are many others listed in our catalog . . . and many beyond that being developed regularly through our continuing research program. If you have need for a special cordage not listed here or in the Columbian catalog, just tell your dealer, or write the company direct.

Columbian NYLON and DACRON Ropes and Twines

• Spun Nylon Rope • Spun Dacron Rope • Filament Nylon Rope • Spun Nylon Heading Twine • Filament Nylon Heading Twine • Spun Dacron Seine Twine • Filament Dacron Seine Twine

You'll find no ravelling in these soft handling, easy-to-splice ropes and twines. Columbian Nylon cordage is "Stabilized" by an exclusive patented process pioneered by Columbian to prevent untwisting and loss of shape. No lost yardage due to "fluffing" — even end-knots are made with ease!

Columbian MANILA and RADIUM SISAL Ropes and Twines

• Net Rope • Buoy Line and Lobster Pot Warp • Heading Twine • Purse Line • Net Mending Twine • Cod End Rope • Trawl Line • Rounding • Shrimp Drag Line • Whale Line • Down-Haul • Bolt Rope • Tackle, Falls and Gear Lines

Every Manila and Radium Sisal rope and twine made by Columbian for fishermen's needs is thoroughly water-proofed . . . treated to prevent mildew, mold and rot . . . and lubricated to eliminate internal friction. Special Copperized, Red Kopper, Tarred and other treatments protect cordage made for unusually severe conditions.

There is a Columbian Rope or Twine exactly right for your uses, your type of fishing, your methods of handling.



The Rope with the Red, White and Blue Markers

COLUMBIAN ROPE COMPANY, AUBURN "THE CORDAGE CITY", N. Y.

No. 1 for Lake Erie Canadian Fleets too!



Placing a clean twine. McLean fishermen tie and lower repaired crib net, after which they will set the tunnel. McLean pond-net boats are all-steel, 28 to 32 feet long, built by Canadian boatbuilders Russell-Hipwell, Gamble Shipyards and Powell Shipyards.



40-foot trap net boat uses powered net lifter, on far side of boat, to lift nets. Wheatley fisheries produce fish by means of pond-netting, gillnetting and trap-netting.



Processing for quick-frozen market. At Omstead Fisheries, fish are cleaned, boned, compressed and sectioned. Here attendants check "fish sticks" before passing them along to breeding machine and deep-fat cooker.



A Typical Chrysler Engine installation. Darrell (left) and Harvey Getty show us the Chrysler Crown Marine Engine, equipped with 2.56 to 1 reduction gear, which has powered this 32-foot pond net boat since 1944.



Chrysler Power helps Wheatley, Ontario fisheries produce more fish at less cost

Getty — McLean — Omstead — each is a well-known, respected name among Lake Erie commercial fishermen. Every season these Wheatley, Ontario fisheries produce about three million pounds of fish — whitefish, pickerel, perch, bass, smelt and sturgeon. Omstead also processes fish for the quick-frozen market. Chrysler Aces, Crowns and Imperial V Special Engines power boats of all three fisheries.

Harvey Getty (Harvey Getty & Sons Ltd.), Murray McLean (McLean Bros. Fisheries) and L. R. Omstead (Omstead Fisheries Ltd.) report amazing day-in, day-out performance and economy. Chrysler Engines put in as many as ten nine-month seasons with no more than an occasional valve grind.

If "down-time" is costing you money, it's time you seriously consider a change to Chrysler Marine Engines — your No. 1 choice for performance, economy and dependability. See a Chrysler Marine Engine Dealer, or write:

Dept. 125, Marine Engine Division, Chrysler Corporation, Trenton, Michigan.

CHRYSLER

America's No. 1 Marine Engine

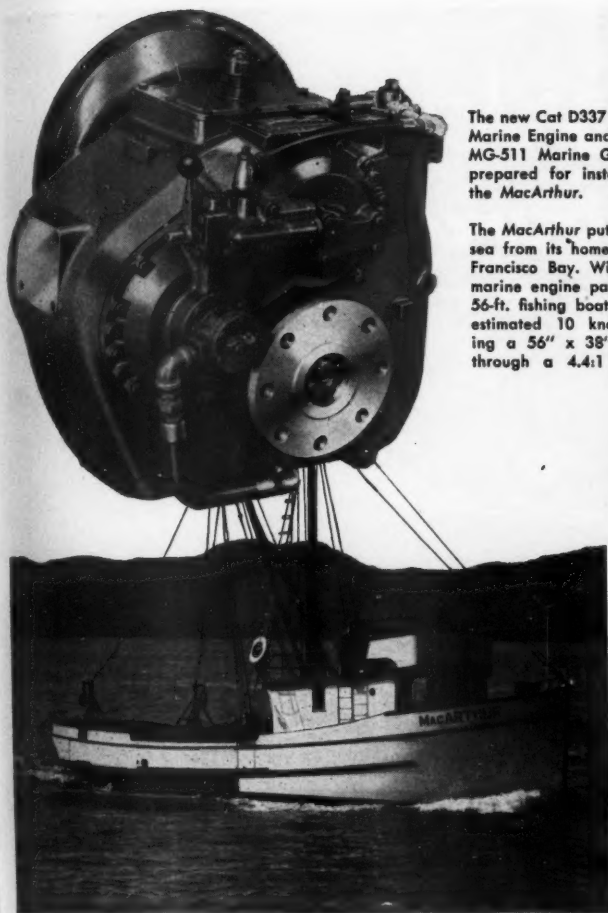
MARINE ENGINE DIVISION • CHRYSLER CORPORATION

Ne
wi

Whe
Arbur
owne
Wand
packag
D337
Marine
Disc M
Reduct
Sele
Marine
installa
light w
the M
wheel
shaft fl
Bes
weight

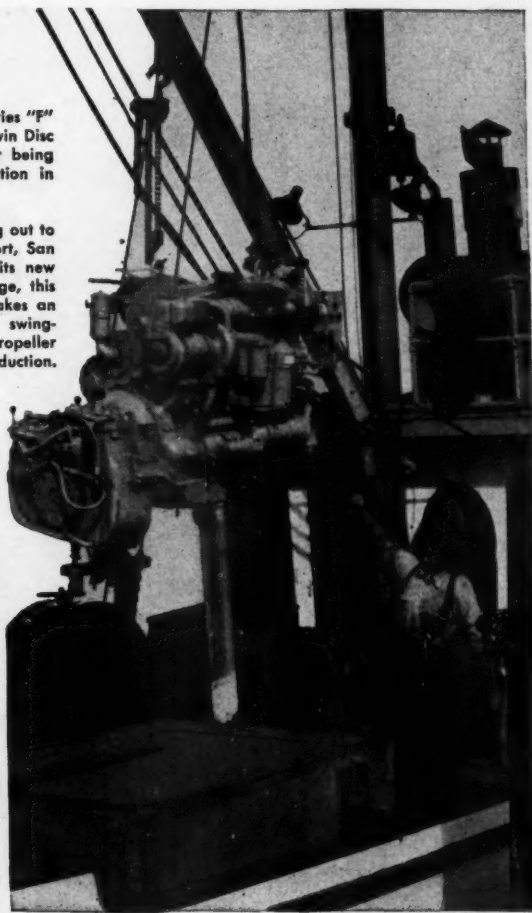
TWIN

MAY, 19



The new Cat D337 Series "F" Marine Engine and Twin Disc MG-511 Marine Gear being prepared for installation in the MacArthur.

The MacArthur putting out to sea from its home port, San Francisco Bay. With its new marine engine package, this 56-ft. fishing boat makes an estimated 10 knots, swinging a 56" x 38" propeller through a 4.4:1 reduction.



New Twin Disc MG-511 Marine Gear installed with first CAT Turbocharged Marine Engine!

When the 56-ft. fishing boat *MacArthur* had its old engine replaced, owners Reidar Enge and G. J. Wandtke chose for their new power package the first-built Caterpillar D337 Series "F" (turbocharged) Marine Engine and the new Twin Disc MG-511 Marine Reverse and Reduction Gear.

Selection of the Twin Disc MG-511 Marine Gear was a "natural" in this installation, where compactness and light weight were all-important. For the MG-511 is only 17½" from fly-wheel housing flange to propeller shaft flange and weighs only 950 lbs.!

Besides compactness and light weight, the Twin Disc MG-511 offers

many other advantages and money-saving features.

- Oil-actuated, oil-bath clutches . . . for cooler, longer-lasting, smoother operation.
- Finger-tip control . . . for fast yet smooth clutch and gear engagement and disengagement.
- Full continuous hp in both forward and reverse . . . a perfect feature for twin screw installations.
- Exceptionally heavy-duty anti-friction thrust bearings.

The Twin Disc MG-511 Marine Reverse and Reduction Gear is designed for service up to 240 continuous hp at 2100 rpm and is available in reduction ratios of 4.4:1, 3:1 and

2:1. Chances are, that in your next marine engine installation *you, too*, can utilize the many advantageous features the MG-511 offers.

For further information on the MG-511, write today to Twin Disc Clutch Company, Racine, Wisconsin. Request Bulletin 307.



TWIN DISC CLUTCH COMPANY, Racine, Wisconsin (Hydraulic Division), Rockford, Illinois

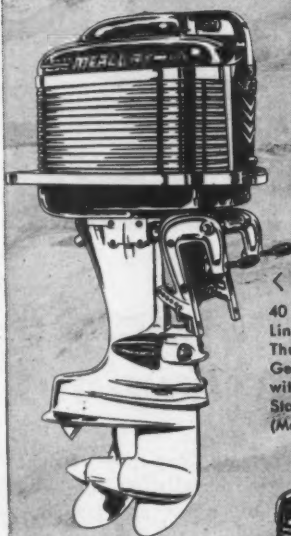
workhorse power!



KIEKHAEFER MERCURY

OUTBOARDS

outperform,
outwork,
outlast others



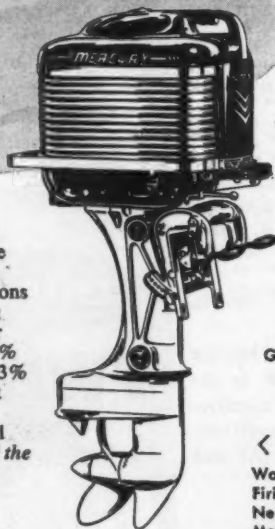
< MARK 55

40 h.p. 4 Cylinder in Line, Alternate Firing Thunderbolt Engine; Reverse Gear and Neutral. Available with Exclusive 12-volt MercElectric Starter and Generator (Mark 55E model)



MARK 25 ^

20 h.p. Alternate Twin Hurricane Engine; Reverse Gear and Neutral. Available with 12-volt MercElectric starter (Mark 25E model)



< MARK 30 Turbo Four

World's First 30 h.p. Alternate Firing Four; Reverse Gear and Neutral. Available with 12-volt MercElectric Starter and Generator (Mark 30E model)

Terrific Fuel Savings!

Triple-checked tests with Mark 30 and competitive 30 h.p. outboard under identical operating conditions reveal Mark 30 delivering up to 25% more miles per gallon, Motor X using 15% more fuel per hour and 33% more oil per gallon! That means the Mark 30's operating economy could save you the entire cost of the motor in 60 days of continuous operation!

Take the worst weather old Mother Nature can dish out... the toughest going an outboard can face! Mercurys have *proved* their ability to take it — in the country's most grueling outboard marathons and in punishing heavy-duty work boat operations the world over!

Only advanced Kiekhaefer engineering gives you Full Jeweled Power — ball and roller bearings throughout — for less power loss through friction, more power delivered to the prop, a longer lifetime of fast starts and operating economy. Mercury Vari-Timed Valves provide correct valve opening and timing at all speeds... waterproofed magneto and spark plugs enable Mercury to shrug off bad weather, keep those payloads going.

Your Mercury dealer will show you many other exclusive Mercury features that make Mercury first choice for working horsepower. Look him up in the yellow pages of your phone book now!

Write for **FREE Illustrated Catalog**
©1956 KIEKHAEFER CORPORATION, Fond du Lac, Wis.
Features of Mercury motors are protected by issued or pending patents.

In this issue

Freedom of Seas Issue Aired at Convention	13
Morro Bay Oysters Are Grown on Tidal Flats	17
Extension of Canadian Territorial Limits	18
New Harbor Oil Tanker "Paam" Servicing Fishing Fleet at New Bedford	19
New 70-ft. Scallop "Stephen R" to Operate Out of Provincetown	21
Stern Trawl Proves Successful On British Factoryship	30
Fuel Consumption of Gulf Shrimp Trawlers Compared	35

NEWS REPORTS

Alabama	27
Boston	49
California	24
Connecticut	44
Florida	29
Georgia	26
Gloucester	22
Great Lakes	28
Long Island	45
Louisiana	39
Maine	20
Maryland	34
Massachusetts	22, 48, 49
Michigan	28
Mississippi	44
New Bedford	48
New Jersey	22
North Carolina	43
Ohio	28
Oregon	24
Pacific Coast	24-26
Rhode Island	23
South Carolina	29
Texas	27
Virginia	32
Washington	26
Wisconsin	28

REGULAR DEPARTMENTS

Fishery Progress	9
Equipment and Supply News	36
Boat Catches for April	40
Where-to-Buy Directory	50
Foreign Bailings	46

Yearly subscription rates: United States, \$4;
Foreign, \$6. Single copies, 50¢.

Accepted as Controlled Circulation
Publication at Manchester, N. H.

NATIONAL FISHERMAN

The Fishing Industry Magazine
Formerly Atlantic Fisherman, Established 1919.

Industry Harmony Needed on Legislation

During the past few months, numerous Bills to aid and promote the fishing industry have been introduced in Congress. Probably at no other time has so much attention been focused on the fisheries, in the Nation's Capitol.

The various Bills that are pending contain many desirable provisions, and it is certain that the industry will benefit from whatever action is taken. Presumably, considerable study went into drafting the Bills so that they might serve the best interests of all concerned.

Nevertheless, at hearings being held on the fishery Bills, some divergent opinions have been evidenced. As with most legislation, it is expected that minor modifications will be suggested. But when widely opposed viewpoints are offered by different segments of the industry, Congress may well be in a quandary as to what action is desirable.

A well-qualified authority on the fishing industry, William J. MacInnis, former mayor of Gloucester, Mass., and counsel for the Atlantic Mackerel Association, recently said: "There exists in the industry a gross lack of cooperation. All factors of the industry are at fault. If the industry sees one part suffering or in difficulty, everything should be done to bring that part up to par. At present, each part is looking out for itself and its own profit, without regard to others."

The question of imports has been of increasing concern to the industry, and domestic fish producers should have some protection against the virtually unrestricted flow into this country of cheaply-produced foreign fish. But here we have fish distributors and processors, who handle foreign supplies, attempting

to thwart the efforts of producers in getting necessary protection.

As MacInnis stated: "Those who are most vocal and who are in Washington a great deal of the time are not producers of fish. They are importers, processors, buyers of fish, but not producers. When we speak of the fishing industry, we ought to have uppermost in our mind our fleets of vessels, our crews and, of course, those who invest money in the vessels."

The fishing ports of our country have been built on the catches of the domestic fishing fleet, and their continued prosperity depends on local production. While imported groundfish blocks, frozen tuna, etc., for processing into finished products at domestic plants may, benefit processing operations, they will not improve the long-range prosperity of the various ports.

While fish distributors may be content to sell foreign fish products, they still must rely on domestic fishermen for many species which are not available from foreign countries. Therefore, distributors should have a vital interest in supporting legislation which will protect domestic producers from inequitable foreign competition.

A close examination of problems facing the fishing industry points to the need for greater harmony and cooperation. Because the fisheries are not a big industry compared to many others, they sometimes are at a disadvantage in obtaining adequate consideration before legislative bodies. For that reason they cannot afford to have a divided house. The various segments of the industry should iron out their differences, work toward promoting the best overall interests, and present a united front.

Published monthly by Atlantic Fisherman, Inc., Goffstown, New Hampshire

P. G. LAMSON
President

GARDNER LAMSON
Publisher and Editor

A. E. BROWN
Managing Editor



Member: National Business Publications and
Business Publications Audit of Circulation



Advertising Representatives: Kennedy Associates, 60 East 42nd Street, New York 17, N. Y.
Murray Bothwell, 234 E. Colorado St., Pasadena 1, Cal.; Wm. C. Walters, Box 619, Atlanta 1, Ga.



Millions have benefited financially from the great savings idea born 15 years ago! Yes, U. S. Series E Savings Bonds helped buy homes, pay for children's educations, build safe retirement incomes. And they can do as much for you. Because Savings Bonds are a *money-building* investment—and the easiest way to save ever devised! Join the Payroll Savings Plan today, or buy U. S. Savings Bonds regularly where you bank.

Safe as America—U.S. Savings Bonds

The U.S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

Local boy makes good



WHEN THE LATE Ebenezer Hubbard, a patriotic Concord man, left a bequest for a local statue, there luckily happened to be a real sculptor close at hand.

Even more luckily, young Dan French had never yet sculpted a whole statue—had, in fact, recently started by whittling on turnips. So he'd take the job for expenses, and glad to get it.

Two years later, Daniel Chester French's first statue went up. And Mr. Emerson, a neighbor, gladly obliged with a little verse to go under it, ending—

*"Here once the embattled farmers stood,
And fired the shot heard round the world."*

Now, during his great lifetime, Daniel French was to make many more statues, but his fame needs only two to rest secure. One is the massive, brooding figure in the Lincoln Memorial. The other is his first: the big, bold, living bronze of the Minuteman of Concord.

When, in 1941, a symbol of American strength was sought, the President picked the Minuteman. Ever since, the Minuteman has been the emblem of the great savings program that helped—and still helps—keep America and her people safe and secure. This year, the 15th anniversary of U. S. Series E Savings Bonds, finds 40 million Americans owning 40 billions of Bonds. Are you among them? For your own security—and the nation's—invest in Savings Bonds regularly. And hold on to them!



B.F. Goodrich



3200 Spongex floats do the work of 7000 conventional floats on this 9 ton net

3000 Spongex Floats celebrate their 5th birthday

After 5 seasons' experience with over 3000 Spongex® seine floats, Capt. C.H. Clark, fishing supervisor for Nelson Bros. Fisheries, Vancouver, B. C. and captain of their 122 ton flagship "Western Producer", says,

"I'm convinced Spongex floats are a major improvement over what we've had in the past. The floats on my net have been in service for five seasons and they look practically new. With conventional floats, I'd have started on the third set by now. Furthermore, corks absorb water, lose buoyancy—take valuable time to dry out. This doesn't happen with Spongex floats—they absorb virtually no water at all.

"Another real advantage is a 1500 lb. reduction in total weight. This means lighter work for the crew and with the net carried on the stern a difference of about 5 tons in capacity of any bulk fish."



As fishing supervisor, Capt. Clark says, "Ultimately the entire fleet will be equipped with Spongex floats."



Since the oval floats have been in service, B.F. Goodrich has developed a cylindrical shaped float in 12 sizes from 3" x 1½" to 6" x 7½". Generally, these floats are believed to be even better than the original ones.

Whichever float shape you prefer, your fishing operation will benefit. Write for information and prices to the address below.



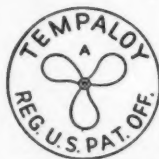
SPONGE PRODUCTS DIVISION
243 DERBY PLACE, SHELTON, CONNECTICUT



THE TWO MOST PRACTICAL SHAFTS FOR MODERN WORK BOATS—FOR REGULAR AND HEAVY-DUTY SERVICE



For most applications Here's why Tobin Bronze*, an exclusive Anaconda product, has for 70 years been first choice of boat-builders and boatowners for dependable propeller shafting. It is manufactured by special rolling processes which impart to this highly corrosion-resistant alloy an unusual combination of tensile strength, fatigue resistance, toughness and high yield strength. Yet it will compensate for sudden jars from driftwood that might otherwise damage bearings and housings.



For high-speed, heavy-duty Tempaloy* Shafting is a popular companion of Tobin Bronze. This corrosion-resistant aluminum bronze alloy combines exceptional strength and toughness with high resistance to shock and is used for high-speed and heavy-duty work which requires maximum shaft strength and toughness with comparatively light weight. Its nominal composition is 82 per cent copper, 9.5 per cent aluminum, 1.0 per cent manganese, 5 per cent nickel, and 2.5 per cent iron.

These Anaconda Shafts are available in lengths and in suitable diameters to meet practically all requirements for pleasure and commercial craft. Leading distributors of marine supplies maintain stocks of Anaconda Shafting and other Anaconda products for the Boating Industry. See them or write for further information. Address: The American Brass Company, Waterbury 20, Conn.

*Reg. U. S. Pat. Off.

56117

ANACONDA® MARINE BRASS AND BRONZE

**Another Satisfied
HATTERAS TRAWLER
Owner!**



"I'm as proud as a peacock about this boat," said Capt. "Halibut John" Borten, veteran fisherman who is skipper and co-owner of the 55-ft. Hatteras Trawler which bears his nickname. "I stayed in Morehead City while the boat was being built. I know what's in it, and I know how it was put together. There's real stuff in her; and real workmanship. I never saw a better boat her size on the Atlantic or Pacific, or in the Gulf. You tell 'em that 'Halibut John' now has the best."



MOREHEAD CITY SHIPBUILDING CORP.
Telephone 6-4146 Morehead City, N.C.

Please send me free pictures and information about Hatteras Trawlers of different lengths.

My name _____

Street address _____

City _____ State _____

MAIL
COUPON
TODAY

► U. S.
A sem
mission
terior
S. 3275,
Magnus
ators h
bill, an
introdu
repres
as pre
March
mittee.
The
be com
3 of w
have p
tic fish
made b
vice an
S. 30
Kenne
Payne,
provid
Fisher
partme
tary, 1
bureau
► Mak
Seaf
into m
reveale
tions
Agricu
Shuma
Farm
farmer
The
dustry
in Mich
ing an
and eff
ing D
priced
despite
farmer
► Big
Nota
United
produc
1956 v
ports
shellfi
154 p
same
Can
two m
greater
ing 5.
from
Unit
sardin
were
oil ex
percen
► U.
Wit
co-ope
elimina
years,
Fisher
cently
optim
that i
merci
L. Far
life S

► U. S. Fisheries Commission Bill

A semi-independent Fisheries Commission under the Secretary of Interior would be established under S. 3275, as amended by Senator Magnuson. Twenty-seven other Senators have signed as sponsors of this bill, and similar legislation has been introduced in the House. The bill represents views of fishing industry, as presented at hearings held in March by Senate Fisheries Subcommittee.

The Fisheries Commission would be composed of 5 members, at least 3 of whom would be required to have practical knowledge of domestic fisheries. Appointments would be made by President, by and with advice and consent of Senate.

S. 3694, introduced by Senators Kennedy, Saltonstall, Smith, and Payne, will not be pushed. That bill provides for establishment of a Fisheries Division in Interior Department under an Assistant Secretary, leaving wildlife functions at bureau level.

► Making Inroads into Meat Market

Seafood has made sizable inroads into meat market in Midwest, it was revealed at recent farmers' conventions in that area. Secretary of Agriculture Benson and Charles B. Shuman, president of American Farm Bureau Federation, are urging farmers to promote their products.

The meat men claim that fish industry has made tremendous gains in Midwest because of better packing and freezer food display units and effective advertising. In a leading Des Moines cafeteria, fish is priced lower than any meat item, despite lamentations of local hog farmers about drop in meat prices.

► Big Increase in Shrimp Imports

Notable among trends shown in United States imports of fishery products during first two months of 1956 were substantial gains in imports of shrimp. Receipts of these shellfish from foreign countries were 154 percent larger than those of same two months of 1955.

Canned salmon imports in first two months of 1956 were much greater than those of year ago, totaling 5.3 million pounds, in large part from Japan.

United States exports of canned sardines during two-month period were 13 percent larger, while fish oil exports also showed gain of 13 percent.

► U. S.-Canadian Lamprey Program

With Canada and United States co-operating, sea lampreys could be eliminated from Great Lakes in 10 years, and probably sooner, House Fisheries Subcommittee was told recently. This prediction, among most optimistic yet given on parasitic eel that is harming Great Lakes commercial fishing, was made by John L. Farley, director of Fish and Wildlife Service, and Congressman Reuss

of Wisconsin. They testified for legislation, already approved by Senate, to implement convention on Great Lakes fisheries between United States and Canada.

By spending about \$750,000 a year for next six or seven years, sea lamprey could be completely eliminated, it is claimed. United States and Canadian Governments have had in operation piecemeal programs against lamprey for a number of years, but in spite of these, the creature has continued to flourish, Reuss said.

► Tuna and Shrimp Most Popular

Recent survey showed that tuna is most popular fish in restaurants, cafeterias and other public eating places in United States, while shrimp is most popular shellfish.

According to Fish and Wildlife Service sample survey, halibut vied with flounder for second place in the finfish category, while oysters were next in the shellfish sales, with scallops and lobsters a close third and fourth.

► Drop in Cold Storage Holdings

Cold storage plants of the country reported holdings of fish and shellfish on April 1 of 128.2 million pounds, compared to 127.5 million pounds on same date last year. However, April 1 total this year includes 7.7 million pounds held by firms that were not included in last year's report. Adjusted figures indicate 7 million pounds less holdings than on same date in 1955.

Major changes were decreases of about 3 million pounds of halibut, 2 million pounds of salmon, 1 million pounds each of haddock and cod fillets, 2 million pounds of unclassified salt-water fish, and 3 million pounds of blocks and slabs used for making fish sticks. There were increases in fish sticks, whiting, scallops, spiny lobster tails, and fillets of ocean perch, flounder and sole.

► Heavy Fish Meal, Oil Production

Total fish meal and scrap production by United States and Alaska firms reporting their output to Fish & Wildlife Service during two months ending with February, amounted to 8,412 tons, compared with 3,844 tons during same months of last year. The fish-body oil yield during first two months of current year was nearly 254,000 gallons, compared with 69,000 gallons in same period of 1955.

► Foresees Fish Consumption Gain

In addressing Merchandising Executives Club of New York recently, John Fulham of Fulham Bros., Inc., Boston, Mass., predicted that per capita consumption of fish and shellfish will show an increase of one or

two pounds by 1960. He said this would result from more fish and shellfish being sold in pre-cooked form.

► Higher Wholesale Fish Prices

Over-all wholesale price index during March for all edible fish and shellfish (fresh, frozen, and canned) was higher by 12.3 percent when compared with March, 1955.

The price index for the processed frozen fish and shellfish subgroup was up by 16 percent this March, due almost entirely to higher frozen shrimp prices. The frozen shrimp price index at Chicago was higher by 32 percent than the March 1955 index.

► Groundfish Fillet Imports Up

Total groundfish and ocean perch fillet imports into United States during first quarter of 1956 amounted to 38.2 million pounds. This was 6 percent more than quantity imported during corresponding period of 1955. Canada, with 25.6 million pounds, led all other countries.

► Russia to Regulate Salmon Fishing

Soviet Union has moved to regulate and control salmon fishing in certain International waters of Bering Sea and Pacific Ocean. Their action is aimed at Japanese fishermen whose netting of salmon during spawning season has been described by Russians as "rapacious" and a threat to economy of Soviet Far East.

Soviet Union declared under its control entire Okhotsk Sea, part of Bering Sea east of Kamchatka and Pacific South of that peninsula. The regulation restricts salmon fishing in the area from May 15 to September 15, the spawning season, and limits 1956 catch to 50,000 tons, about 25,000,000 fish. In addition to issuing permits, Russian authorities are "to inspect and control" fishing in the area.

The Chief of Japan's Fishing Board has stated that Japan will not recognize new Russian restrictions. He called Russian act a violation of basic principles of fishing in open sea.

► California Leads in Fish Canned

California led Nation in 1955 in production of canned fish and in manufacture of fishery by-products, according to Fish and Wildlife Service. Total value of the California canned fish and by-products was \$147,350,000, nearly 40 percent of National total of \$386,000,000.

Alaska followed California with canned fish and by-products valued at \$60,000,000; Washington was third with like commodities valued at \$26,500,000; with Oregon, Maine and Louisiana grouped with outputs approximating \$21,000,000.

FISHERY PROGRESS

Johnson

SEA-HORSE

OUTBOARD MOTORS



NEW SEA-HORSE
30

NINE GREAT MOTORS

*JAVELIN.....	30 hp..	\$582.00
*SEA-HORSE 30 ...	30 hp..	552.00
SEA-HORSE 30 ...	30 hp..	462.00
*SEA-HORSE 15 ...	15 hp..	452.00
SEA-HORSE 15 ...	15 hp..	362.00
SEA-HORSE 10 ...	10 hp..	321.00
SEA-HORSE 7½ ..	7½ hp..	241.00
SEA-HORSE 5½ ..	5½ hp..	216.00
SEA-HORSE 3	3 hp..	146.00

*Electric Starting... Prices f.o.b. factory, subject to change... OBC certified brake hp at 4000 rpm (30's at 4500 rpm).

Mount your Sea-Horse at the stern of your boat, in a center well, or at the side—wherever it's most convenient. Use your Sea-Horse to power a raft, a log, a dugout, a barge, or a sleek custom hull. Navigate waters as shallow, rocky or deep as your boat can handle.

All this flexibility and versatility is yours at little initial cost. Operating and maintenance expenses are low, too!

Johnson Sea-Horses are famous for Dependability—the feature that most commercial fishermen want *first*. See your Johnson Dealer. Ask him about the nine great 1956 Sea-Horses—and the new features that give you smoother operation, easier starting, greater economy than ever before! Look for your Dealer's name under "Outboard Motors" in your classified telephone directory.

FREE: Catalog describing all nine 1956 Johnson Sea-Horses. Complete. Factual. Helpful. Write!

JOHNSON MOTORS, 6100 Pershing Road, Waukegan, Illinois
A DIVISION OF OUTBOARD MARINE & MANUFACTURING COMPANY
In Canada: Manufactured by Johnson Motors, Peterborough

ALL JOHNSON SEA-HORSES ARE PROTECTED AGAINST SALT WATER CORROSION — NO FLUSHING NECESSARY



COUNT ON YOUR WICKWIRE ROPE DISTRIBUTOR FOR ENGINEERING ASSISTANCE

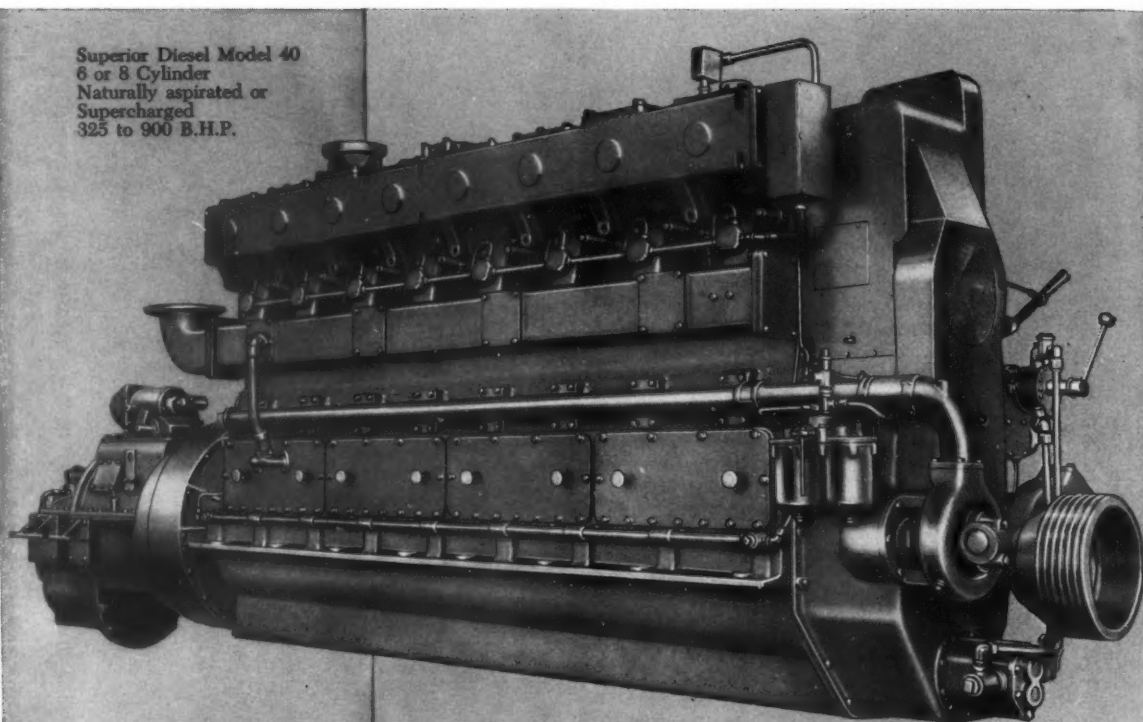
When it's a question of wire rope, the place to go is to your Wickwire Rope distributor. He knows your requirements. He knows wire rope and how it can be used to best advantage. In addition, he can provide you with this important extra—the technical assistance of Wickwire Sales Engineers. With the additional help of these capable specialists, he can give you expert, practical advice on even the toughest wire rope problems.

Your Wickwire Rope distributor is a good man to know. He's quality people handling quality products. Buy your wire rope and wire rope slings from him. You'll find that the many valuable services he offers far outweigh any apparent price advantage you might gain by buying direct.



A PRODUCT OF THE COLORADO FUEL AND IRON CORPORATION

Superior Diesel Model 40
6 or 8 Cylinder
Naturally aspirated or
Supercharged
325 to 900 B.H.P.



if your boat
requires from
325 to 900 B.H.P.

MODEL 40 Superior Diesel
provides greater dependability and
the lowest operating costs!

For the utmost dependability and greatest operating economy in tugs, towboats, dredges, fishing vessels and other workboats, there's no better power plant than the Superior Model 40! This rugged, diesel engine can provide more years of trouble-free, profit-boosting performance at the lowest possible operating costs . . . here's why:

FUEL SAVING COMBUSTION SYSTEM saves up to 35% fuel consumption compared with other engines in very similar hulls. Improved air intake and scavenging, combined with most ideally designed combustion chamber, make these big fuel savings possible.

STATICALLY-DYNAMICALLY BALANCED CRANKSHAFT carried on long-life, precision bearings provides practically vibration-free operation, reduces wear on engine accessories, permits faster acceleration.

EXTREMELY RIGID MARINE BEDPLATE resists hull dis-

tortion effect on engine, provides better alignment with propeller shaft thereby reducing vibration. It absorbs firing thrust, reduces stress on the block to greatly lengthen engine life.

SIMPLICITY OF RUGGED CYLINDER BLOCK provides larger than usual access to bearings, camshaft and fuel pumps for easier routine maintenance. Keeps downtime for servicing to a minimum.

INDIVIDUAL CYLINDER HEADS, LINERS, FUEL PUMPS are specifically designed for longest service life. This simplifies maintenance, provides greater performance dependability.

Whether you're choosing a diesel for a new boat or repowering, you can rely on the Superior Model 40 for longer service life, lowest maintenance, fuel, and lubrication costs! Get complete details at your nearest sales and service office listed below.



WHITE DIESEL ENGINE DIVISION

THE WHITE MOTOR COMPANY • Plant and General Offices: Springfield, Ohio

SALES AND SERVICE POINTS: Gloucester, Mass. • Houston, Ft. Worth, Texas • San Diego, Oakland, Terminal Island, California • Ketchikan, Alaska • Washington, D.C. • Portland, Astoria, Oregon • Casper, Wyoming • Halifax, Nova Scotia • Vancouver, B.C. • Park Rapids, Minnesota • New York • Chicago • Seattle • New Orleans • St. Louis • Wichita, Kansas

Intern
disput
Fisher

"F
t
Massac
conven
1200 m
ings, h
Frank
New Y
Institut
industr
business
Ralph
elected
Koulou
retary.
Co., Pe
Regio
rock Fi
Standar
SeaPak
Jack B
kamp, V
L. R. B

Since
keynote
peacefu
out det
Treat
and oth
of the
Pacific
world v
under t
find wh
establis
lation f
enforce

SPEAKER
Plains, N

Freedom of Seas Issue Aired at Convention

International cooperation to solve fishing rights disputes between nations favored by National Fisheries Institute members at Miami meeting

"FREEDOM of the seas and sovereignty over the seas by adjacent countries are simply incompatible doctrines," declared Senator Leverett Saltonstall of Massachusetts, keynote speaker at the eleventh annual convention of the National Fisheries Institute. More than 1200 members of the fishing industry attended the meetings, held at Miami Beach, from April 15-18.

Frank W. Wilkisson, head of Frank W. Wilkisson Co., New York, was elected president of the National Fisheries Institute. Mr. Wilkisson's family has been in the fishing industry for nearly 50 years, his father having gone into business in the Fulton Fish Market in New York in 1908.

Ralph Carr, Mid-Central Fish Co., Kansas City, was elected treasurer of the Institute; while Aldo Casaretto, Koulouris & Casaretto Co., Los Angeles, was named secretary. Retiring president Francis W. Taylor, Warren Fish Co., Pensacola, Fla., is the new chairman of the board.

Regional vice-presidents are: Sidney H. Cohen, Shamrock Fisheries, Inc., Boston, Mass.; H. R. Humphreys, Jr., Standard Products Co., White Stone, Va.; J. Roy Duggan, SeaPak Corp., St. Simons Island, Ga.; Elmo C. Jack, E. C. Jack Brokerage Co., Los Angeles, Calif.; Norman Weitkamp, Washington Fish & Oyster Co., Seattle, Wash.; and L. R. Besore, Fishermen's Federation, Inc., Chicago, Ill.

Protecting Fishery Resources with Treaties

Since we are leaders in conserving natural resources, keynote speaker Saltonstall pointed out, we have found peaceful means of protecting the harvest of the seas without detriment to the "freedom of the seas" doctrine.

Treaties are now in effect between the United States and other nations on the seal, halibut and salmon fisheries of the North Pacific; Great Lakes fisheries; Southeast Pacific tuna fisheries; Northwest Atlantic fisheries; and world whale fisheries. Senator Saltonstall explained that under these treaties, scientific research is done jointly to find what regulations are needed; joint commissions are established to put the research results into practical regulation form; and the regulations are jointly and equally enforced on all citizens of all the participating countries.



NEW OFFICERS OF THE NATIONAL FISHERIES INSTITUTE being congratulated by Irving Usen of O'Donnell-Usen Fisheries Corp., Boston, a past president of the NFI. From left to right are: Aldo Casaretto, Los Angeles, the new secretary; Frank W. Wilkisson of New York, newly-elected president; Ralph Carr, Kansas City, treasurer for the coming year; and Mr. Usen.

Senator Saltonstall continued: "The United States, second to Japan, is the largest fishing country of the world. We harvest close to five billion pounds of food from the sea each year. While most of this comes from off our own shores, our fishermen fish in the high seas off the coasts of many other countries, and the fishermen of many other countries fish in high seas off our coasts."

The Senator deplored the failure of the Inter-American Council of Jurists to study and discuss adequately conservation problems at their recent Mexico City meeting. "Responsible officials of our Government," he said, "are most disturbed about the actions taken, with no study and little discussion."

"The United States regards the deliberations of this Council as of particular importance to us especially, because in Latin America the attempt to achieve conserva-



SPEAKERS AT NATIONAL FISHERIES INSTITUTE CONVENTION included Harry A. Trimm, Jr., (left), Birds Eye Division, General Foods, White Plains, N. Y.; Francis W. Taylor (center) Warren Fish Co., Pensacola, Fla., retiring president of the National Fisheries Institute; and Congressman Herbert C. Bonner of North Carolina, chairman of the House Committee on Merchant Marine and Fisheries.



PANEL ON FRESH WATER FISH PROBLEMS. From left to right are: moderator Ralph Carr, Mid-Central Fish Co., Kansas City; Chester Rabinowitz, Union Fisheries, Inc., New York; Ray Full, Kishman Fish Co., Vermilion, Ohio; and Alan Smith, Smith Bros., Port Washington, Wis.

tion by broad extensions of territoriality into the high seas has been resorted to. Claims of 200 miles and more have been made, but without practical effect because maritime nations under existing International law have been unwilling to acknowledge such claims."

Says Imagination and Initiative Needed

Senator Saltonstall added that a new era of progress and profit can be brought about in the fishing industry by exercising fully the imagination and initiative which have for many generations characterized this nation.

He said, "It might well be that this convention could consider, for both its practical and psychological values, what could be called 'A Declaration of Progress and Policy for the American Fishing Industry.'"

"Individual enterprise, initiative in judgment and action, have traditionally been characteristic of fishermen," Senator Saltonstall declared. "While it is true that Government can and should lend a hand where problems are encountered that are beyond the ability of private enterprise to solve, it is equally true that the Federal Government never should be permitted to bulk so large on the fishing industry scene that it becomes a dominating and suffocating influence."

He asked: "Has not the time come for the American fishing industry to speak in loud and clear tones of its objectives and of the way in which those objectives can be made to serve the nation? This industry is essential to America as the provider of one of our most important foods. It is needed as a naval auxiliary in time of National Emergency."

"Your industry deserves to have the attention of the nation called to it in dramatic yet sensible ways. There is no reason why the country should not in the months and years ahead be made increasingly fish-conscious through intensive research and promotion."

"With new processing methods, attractive and dramatic packaging techniques, and the impetus of an imaginative promotional campaign, the American fishing industry can serve both its own purposes and those of the nation in a constantly growing and very satisfactory and substantial way."

Discuss High Seas Conservation Problems

International fisheries problems centering around International law and its bearing on fishing rights of different countries were aired at the convention before a member of the U. S. Senate, ten members of the U. S. House of Representatives and other Federal Government officials.

Among other steps advocated by members of the fisheries group, who discussed their problems with the Congressmen, were:

1. Action by Congress outlining general U. S. policy on International fisheries matters.

2. Representation of the U. S. by top experienced Governmental fisheries personnel at future International conferences and at the General Assembly of the United Nations.

3. Upgrading to policy level of the fisheries agency in the Federal Government.

Generally speaking, the fisheries group was in favor of International agreements, whereby the high seas conservation problems may be settled by International cooperation with differences with respect to the necessity for conservation measures and the kind of measures applied, to be settled by arbitral procedures.

It was revealed that the American fishing industry is taking a more positive and progressive position in collaboration with the United States Government, particularly in relation to fisheries problems to come before the United Nations this Fall as a result of studies of its International Law Commission.

While many countries favor limitation of jurisdiction over fisheries waters within three to six miles of each country, others, and particularly certain Latin American nations, favor such jurisdiction extending as far as 200 miles, and it is to work out these differences that negotiations have been in progress for several years.

Within the past month, the Soviet Union has set up a fisheries conservation zone off the coast of Kamchatka which, it was pointed out, is almost certain to cause difficulties with the Japanese salmon industry.

Speaking at the conference on behalf of U. S. fisheries interests were: Dr. Wilbert M. Chapman, San Diego,



ANNUAL SERVICE AWARD of the National Fisheries Institute being presented to Senator Leverett Saltonstall of Massachusetts (left) by F. M. Bundy of Gorton-Pew Fisheries Co., Ltd., Gloucester, Mass., a former president of NFI.

director of research of the American Tuna Boat Association; Miss Mary Schulman, assistant attorney general of Florida; James Barr, Brownsville, Texas, representing the shrimp interests; Charles Carry, San Pedro, representing the California Fish Cannery Association; Charles Jackson, general manager of the National Fisheries Institute; George Steele, representing the National Cannery Association; Thomas D. Rice, Mass. Fisheries Assoc.

Leverett Saltonstall of Massachusetts was the member of the Senate who heard the fisheries group. Members of the House Committee on Merchant Marine and Fisheries who were present were: Chairman Bonner, North Carolina; Yates, Illinois; Norblad, Oregon; Cederberg, Michigan; VanPelt, Wisconsin; Chase, Nebraska; Tollefson, Washington; Allen and Maillard, California; Klucynski, Illinois; Sullivan, Missouri.

Also present was Assistant Secretary of Interior Wesley A. D'Ewart, and William Herrington, special assistant on fisheries and wildlife in the State Department.

Mr. Herrington reviewed the history of problems of territorial waters and jurisdiction over fisheries resources



DISCUSSION ON TRAFFIC PROBLEMS. Left to right: Jack T. Styron of Louisiana Menhaden Co., New Orleans, who presided; Leo Weil, chairman of the National Fisheries Institute's Traffic Committee; Charles B. Bowling, U. S. Department of Agriculture; William J. Angello, Jr., Commerce Attorney; Gordon Stedman, Growers and Shippers League of Florida; and William C. Ehalt, Director of Traffic for NFI.

from 1930, when a world conference was held on the subject to try to work out International agreements. Generally it was agreed at that time that territorial sovereignty should be three miles, with a minority of countries supporting four to six miles.

Using More Effective Merchandising Techniques

"The fisheries business is growing out of its swaddling clothes so far as knowing and appealing to the housewife and her family," said Frank W. Wilkisson upon election as president of the National Fisheries Institute.

"While fish products have been part of the American menu since the founding of the nation, it is only in the past few years that the industry has realized their products can be merchandised and sold to the consumer in new and more effective ways," Wilkisson commented.

"There was a time" he said, "when fisheries foods were largely consumed on the nation's coasts. But that day is rapidly passing. Today the housewife can get varieties of our products in the innermost sections of the nation; brought to her through the most modern methods of refrigeration.

"Fish products always have been glamorous in the eyes of the American people. We have managed to preserve their glamour, at the same time developing newer and more attractive ways of preparation and presentation. Not only is this true in pre-cooked fish such as fish sticks, but it is also true of fresh fish products."

Wilkisson said that Americans are eating more fisheries

products than ever before, and he anticipates that increased consumption will continue for some years to come. At the same time, hotels and restaurants are finding increasing demand for fisheries products, he said.

Antibiotic-Treated Fish May Open New Markets

Leaders in the fishing industry were asked by Jack D. Langlois of Chas. Pfizer & Co., Inc. to work hand-in-hand with researchers in correctly evaluating the use of antibiotics for preserving fish. Mr. Langlois said that analysis of the economic benefits of antibiotic treatment in extending shelf life of fish, undertaken jointly by the chemical and fishing industries, may widely extend the present fish market. Mr. Langlois is manager of the Food and Beverage Department of Pfizer's Chemical Sales Division.

In addressing the convention, Langlois declared: "The use of Biostat, a commercial antibiotic preparation developed by Pfizer, is currently on an evaluation basis; fish so treated are not to be sold commercially. However, we are confident that within a reasonable period of time we will be able to substantiate to the Food & Drug Administration as a result of exhaustive tests that when Biostat is added at recommended levels, there is no residue remaining prior to consumption. Inactivation occurs due to storage and/or cooking."

Mr. Langlois stated that the use of Biostat would necessitate no major changes in present-day icing techniques and commercial procedures. He pointed out that bacterial attacks begin as soon as fish are caught, adding that it is this type of spoilage which results in the most serious economic losses.

It is claimed that antibiotics used in small concentrations—a few parts per million in the fillet dip tank—will extend the freshness of fillets from 100 to 200 percent. Mr. Langlois said that in a recent experiment under commercial conditions, antibiotic-treated fillets were fresh at 4 weeks, while the untreated ones spoiled in a week.

Mr. Langlois continued: "Antibiotics are not a substitute for sanitation and refrigeration. Thus in using them, you have an additive cost factor to consider. What the exact cost will be is difficult to estimate on an individual basis, but initially it probably will be $\frac{1}{4}$ to $\frac{1}{2}$ ¢ per lb. Now we, of course, realize that with the margin of profit what it is today, figures like this are out of the question unless there are ways to compensate. Well, what are the possibilities? As an example, let's assume you determine that Biostat will allow you seven extra days of freshness time. What can you do with this time?

"First, there is the possibility that the fishing voyage can be extended to cover a greater area and thus make possible a more economical load of quality fish per boat. Second, as a canner faced with a short season and tremendous quantities to process in a brief period of time, it would be possible to level out production peaks and



JUDGING FISH FILLETS are Murray Wheeler, left, public relations director of the National Fisheries Institute; and L. Vernon Drape of Ell-Vee-Dee, Inc., Fall River, Mass.



JUDGING OF FISH PRODUCTS. Left to right: Joseph A. Stern, University of Washington School of Fisheries; Rufe Littlefield, Seattle Seafoods, Inc.; and Earl P. McFee, Gorton-Pew Fisheries Co., Ltd., Gloucester, Mass.

valleys by more normal scheduling. As a freezer you could guard against accidental spoilage during storage and transit. However, I believe most important is the opportunity to use at least some of these extra days of freshness time to develop new markets for fresh fish that were formerly out of reach due to distances involved. In every case a better quality product is bound to win new consumer acceptance.

Fish Promotion Program

Plans for increasing fish product consumption by one pound per person—165,000,000 pounds a year—were presented by Harry A. Trimm, Jr., Birds Eye Division of General Foods, White Plains, N. Y. Mr. Trimm is chairman of a special committee of the industry to increase fish consumption. Every member of the industry and all retail outlets are being asked to join in the Fish Parade to be held next October, when nation-wide promotion will be undertaken on behalf of all fish products.

"Other trade groups have capitalized on their opportunities," said Mr. Trimm, "by simply applying cooperative promotional and marketing techniques to what individual producers and processors do on behalf of their trade-named products. They have made their products glamorous and appealing by such joint efforts. We of the fisheries industry need to apply a few adjectives to our products such as delicious, delectable and nutritious."

Fish Stick Standards

Voluntary standards of quality for fish sticks will be put into effect shortly as a result of cooperation between major departments of the Federal Government and the fisheries industry itself. This was made known by Wesley A. D'Ewart, Assistant Secretary of the Interior, under whose direction negotiations for the standards have been carried on for many months.

"The fishery standards have been worked out by the Department of Interior, in cooperation with the National Fisheries Institute, and will be promulgated by the Department of Agriculture. After issuance of the new fisheries standards, inspection and certification service, on a new basis, will be supplied through the framework of the Department of Agriculture's existing inspection facilities."

Mr. D'Ewart continued: "It seems inevitable that these new voluntary standards will set a pattern for larger and more stable markets for fisheries products. In the beginning, at least, it is likely that emphasis on the new standards will be confined to frozen fishery products. Measurement of quality and the assurance of accuracy of

that measurement is a substantial step along the path of more efficient buying and selling of any product on a National scale."

Fresher Fish through Use of Antibiotics

The prospect of fresher fish for consumers and more profit for fishermen was held out to industry representatives by Dr. Wilbur H. Miller of American Cyanamid Co. He pointed out that there is widespread and convincing evidence that the revolutionary concept of using antibiotics to preserve food can be effectively applied in the fishing industry.

Dr. Miller, who is Director of Industrial Applications for American Cyanamid Company's Fine Chemicals Division, reported that a new antibiotic process, called Acronize, already is being used to preserve fresh-killed poultry. The U. S. Food and Drug Administration acceptance of the Acronize process for poultry is based on the fact that none of the antibiotic remains in the food after cooking. As an added safety factor, Dr. Miller said American Cyanamid Co. is requiring that strict sanitary standards be maintained before a poultry processor is franchised to use Acronize.

Dr. Miller disclosed that research has now reached a point where the top quality freshness of scrod haddock, halibut and salmon can be prolonged as much as a week, a significant period when considered in terms of its effect on shipping, shelf life and consumer appeal. He reported that other experiments have been carried out with marked success involving black bass, red snappers, weakfish, sardines and shucked oysters.

"The results of our various trials agree with the possibility of landing fish which have greater freshness and more uniform quality," said Dr. Miller, "even though these fish are obtained from areas which may be somewhat farther from present ports."

Dr. Miller explained the Acronize process is based on a simple formulation of the antibiotic Aureomycin chlortetracycline. He said only trace amounts of the antibiotic are used, and their effect is to retard the action of bacteria which cause spoilage.

The speaker said the antibiotic formulation was devised to fit as easily as possible into present ways of handling various food products. "For fish," said Dr. Miller, "we have devised ices, dips and sprays containing chlortetracycline."

Dr. Miller cited one trial involving salmon caught in waters off the State of Washington. As they were caught and eviscerated, some fish were placed in ordinary ice and some were put in ice containing minute quantities of Aureomycin, only five parts per million. These fish then were shipped cross country to New York in commercial refrigerated cars. "On arrival," said Dr. Miller, "the contrasts in color and odor were readily apparent."

The speaker explained that the salmon stored in ordinary ice not only had a slight off-odor, but they also were lighter in color with brown discolorations throughout. The salmon shipped in chlortetracycline ice had a fresh, sweet odor and a uniform pink color. "The estimated extension of shelf life due to our antibiotic ice was about one week," said Dr. Miller.

Increase in Shrimp Consumption

Statistics released by the Shrimp Association of the Americas at the annual convention of the National Fisheries Institute show that the nation is now consuming more than 350,000,000 lbs. of shrimp a year, valued at \$225,000,000, an increase of about ten percent over 1954.

"Americans are now consuming shrimp at the rate of two pounds per capita," declared Manny Sanchez, Brownsville, Texas, president of the Shrimp Association. "Our shrimp products, once classified chiefly in the cocktail category, are rapidly moving into the main-dish area on Americans' menus. Sales in 1955 reached an all-time high, and shrimp is now the largest single fish product in dollar volume of sales."

Frozen shrimp took a lead over fresh shrimp in consumer sales for the first time during 1955. The frozen

(Continued on page 33)

Morro Bay Oysters Are Grown on Tidal Flats

OF all commercial oystermen probably those of Morro Bay, California—midway between Los Angeles and San Francisco—have the easiest and most unique methods of producing and harvesting their shellfish.

While Eastern oystermen must go out in boats and dredge or tong for oysters, the Morro Bay oyster farmers plant theirs on tidal flats, fence and tend them like any other planted crop, and then in a couple of years go out during low tide and walk about the flats in hip boots picking up the oysters and placing them in wire field baskets. The field baskets are emptied into larger steel baskets holding 600 pounds of oysters.

Come the next high tide, an outboard-motor-powered barge comes along, picks up the loaded baskets and takes them to the packing house on the bay shore for shucking and packing in glass jars under the brand name of Pacific Oysters, El Morro Oyster Co.

The oyster farms of Morro Bay produce a large proportion of the oysters consumed in the Southwest. Morro Bay oysters can be eaten the year around, though the packing season generally extends from October to June. More northerly Pacific coast oysters are produced in warmer inland waters, and therefore spawn yearly. At such times they are not harvested. Morro Bay oysters are bathed in cold sea water practically all the time, there being a strong tidal sweep in from the near-by sea, and a great break in the sea wall.

Japanese Seed Used

Since oysters do not spawn in Morro Bay, they must be planted. The seed is imported from Japan, \$8 per case delivered, with 15,000 baby oysters guaranteed per case. Twenty cases plant an acre of bay bottom.

The seed oysters are planted in January, simply being shoveled off the barge tops and scattered over the bay floor as the barges move along over selected flats. Two thousand cases of oyster seed from Japan were planted in January, 1956. At a minimum guarantee of 15,000 baby oysters per case, some 30,000,000 baby oysters started on their two-year growing period.

About 90% of Morro Bay's 300 planted acres of Pacific oysters are leased from the California Department of Fish & Game by W. C. Brown & Sons and Mrs. Agnes Leage, who owns and runs the El Morro Oyster Co. packing plant. Mrs. Leage reports that the combined oyster production of Morro Bay, all of which is handled by her plant, amounts to some 50,000 gallons annually. The trade prefers oysters running 20 to the pint, but lots of Morro Bay oysters run 3 to 4 to the pint. These king-size oysters are marketed locally.

The El Morro Oyster Co. is now building a larger, more modern steel and concrete packing plant to handle the increased production of the oyster beds. It will cost in excess of \$75,000, according to Mrs. Leage. The two-story

(Continued on page 47)



Walter Rietz, retired businessman who leases commercial oyster beds in Morro Bay, Calif., shown inspecting a superb crop of oysters ready for market. Famous Morro Rock, which is 576' tall, can be seen in the background.



Morro Bay, Calif. at high tide, with the oystermen power-lifting 600-pound baskets of oysters from the beds. These baskets are brought to port on outboard powered barges.



Charles Brown, whose father is one of the largest oyster acreage holders in Morro Bay, Calif., gathering fine king-size oysters. Brown is wearing heavy gloves to protect his hands from shell cuts, and also has U. S. Royal hip boots.



Some of the Nova Scotia delegates to the Fisheries Council of Canada convention, with two United States representatives who attended the meeting. Left to right, front row: H. B. Swim of Lockeport, N. S.; C. J. Morrow, Lunenburg; Francis W. Taylor of Warren Fish Co., Pensacola, Fla.; R. P. Fletcher, Booth Fisheries Corp., Chicago, Ill. Back row: Ray Brooker, Halifax; H. D. Pyke, Lunenburg, who was elected a vice-president of the Canadian organization; Don MacKenzie and B. I. Meagher of Halifax.

Extension of Canadian Territorial Limits

From three miles offshore to twelve miles beyond headlands recommended by Fisheries Council of Canada at annual meeting

THE recommendation that Canada define her territorial limits as the distance 12 miles beyond a baseline drawn from headland to headland instead of the existing limit three miles offshore, was made in a unanimous resolution passed last month in Ottawa at the closing of the 11th annual meeting of the Fisheries Council of Canada. The three-mile territorial limit is a hand-down from the policy traditionally followed by the British Government, and the distance is supposed to have been determined originally by the range of a coastal defense cannon.

Another resolution in connection with territorial limits asked the Government to remove the regulation which prohibits Canadian fishing vessels over 65' in length from fishing inside a 12-mile limit along the Atlantic mainland. This regulation, put into effect many years ago to protect inshore fishermen mainly from gear damage by the larger vessels, is discriminative against an increasingly important section of the Canadian fishing industry, the resolution stated. It was pointed out that foreign vessels observe only the three-mile limit and are intensifying their operations in an area denied Canadian fishing boats.

The Fisheries Council requested that the Canadian Government press for relaxation of U. S. tariff rates, with the object of increasing trade between the two countries and world trade generally; that the Minister of Fisheries continue to discuss with the United States the study of the pink salmon fishery in the Straits of Juan de Fuca, Puget Sound and the Fraser River for the purpose of bringing these fish under joint International management for conservation purposes; and that the Government permit the importation of fishing vessels of a length of 65' and over so that the industry can replace its obsolete vessels more economically.

Approve Fish Promotional Program

Delegates to the meeting of the Fisheries Council of Canada unanimously approved a promotional program designed to increase the sales of fisheries products in Canada. Last year, for the first time, fishermen inaugurated an industry public relations program aimed at creating greater interest in the fishing industry and increasing consumption of their products in Canada. Progress of this program was reviewed at this year's meeting, and measures were adopted to institute a more aggressive program in 1956.

It was pointed out that the Canadian fishing industry has a stake in a fiercely competitive market for the con-

sumer food dollar. Increased promotion on behalf of the fishing industry is only one of the many advances made in the past few years. There have been improvements in fish processing and marketing, and those engaged in the Canadian fishing industry are continually improving standardization and quality control of their products.

Predicts Negotiation of Pink Salmon Treaty

Fisheries Minister James Sinclair predicted that on the Pacific Coast an International agreement with the United States concerning the pink salmon runs of the Fraser River would be negotiated in the near future. Canada's fishermen on the West Coast have been trying to get a setup similar to the International Pacific Salmon Fisheries Commission which has been so successful in rebuilding the sockeye runs of the Fraser River. Sinclair pointed out that the United States became interested in a treaty recently when Canadian fishermen began going farther out to sea to catch pink salmon.

Mr. Sinclair said that Russia is becoming increasingly interested in agreements affecting fishing in International waters, and has asked to have an observer present at the annual meeting this Fall of the International North Pacific Fisheries Commission, to which Canada and the United States and Japan are signatories.

U. S. Fish Imports from Canada

J. Norman Hyland, president of the Fisheries Council of Canada, reported that for the third time in five years the Canadian fishing industry is faced with a move on the part of United States interests to restrict imports of Canadian groundfish fillets. Mr. Hyland said the Canadian fishery producers are concerned by the application of a group of U. S. groundfish fillet producers who want to have the subject of groundfish fillet imports reviewed again by the U. S. Tariff Commission.

Approximately 65 percent of Canada's fishery production is sold to countries other than Canada, and 70 percent of this export volume is to the United States. "As an industry we make no apology or defense of the fact that Canadian fish producers depend importantly on the U. S. market," Mr. Hyland said. "This is merely the outcome of utilizing certain of our geographic and natural advantages of production."

Mr. Hyland pointed out that as Canadians "we buy from the United States over ten times as much per capita as we

(Continued on page 30)

New Harbor Oil Tanker

"Paam" Servicing Fishing Fleet at New Bedford

Steel seine boat for use in trap fishing also completed by Massachusetts shipyard

THE new harbor oil tanker *Paam* for servicing the New Bedford, Mass. fishing fleet and a steel seine boat for the Rhode Island trap fishery, were completed recently by Gladding-Hearn Shipbuilding Corp., Somerset, Mass. The firm specializes in construction of steel craft for use in various phases of the fishing industry, and has built three such boats since they began operations last Fall. Their first was the 47' steel dragger *North Star*, designed for Rhode Island trash fishing.

The new 58' floating filling station *Paam* offers ship-side delivery of fuel and other petroleum products, as well as engine room needs. The 20,000-gallon harbor tanker was constructed for Paul Saunders of Saunders Oil Co. of New Bedford in approximately ten weeks.

The new tanker was designed by Preston R. Gladding, President and Naval Architect at the shipyard, and has 16' beam and 6' depth. She is constructed of $\frac{1}{4}$ " steel plate, designed to meet American Bureau of Shipping Standards, with heavy guards at the sheer and chine for protection from wharves and other vessels. The craft has gross tonnage of 44.35 and net tonnage of 36.

Steel Seine Boat for Trap Fishing

Gladding-Hearn Shipbuilding Corp. recently delivered the first all-steel seine boat for the Newport, R. I. trap fishing industry to Tallman and Mack Fish Trap Co. The 31'6" x 8'6" x 4'6" prototype steel craft is intended to replace conventional wooden boats used by Tallman and Mack for seining operations, and is expected to have many advantages over the wooden boats.

The owners report the new steel seine boat is lighter than the wooden ones, and are pleased by the fact that the 1,000 pounds of ballast required when towing the symmetrically-ended wooden craft will no longer be needed due to the special steel hull form developed by Naval Architect Preston R. Gladding. The new design insures proper stability so that eight men can be stationed on one side to haul the heavy nets over the rail.

The steel seine boat has a sunken deck approximately 20" below gunwale amidships, flush decks at each end and three watertight compartments in the bow, stern and amidships, which make her virtually unsinkable. When being towed to and from the traps, the boat can roll over and ship water but still will float. It is expected that



New 58' harbor oil tanker "Paam", owned by Saunders Oil Co. of New Bedford, Mass. She supplies fishing boats with fuel and lubricating oil, and was constructed by Gladding-Hearn Shipbuilding Corp., Somerset, Mass.

the steel hull will remain tight with years of hard usage, and that the watertight decks and compartments will mean no lost time from flooded boats when working or towing in heavy seas.

Another advantage of the steel seine boat, aside from durability, is smooth edges over which the seines are drawn. With wooden sides, a splinter or a loose nail might easily tear a net.

Good Maneuverability

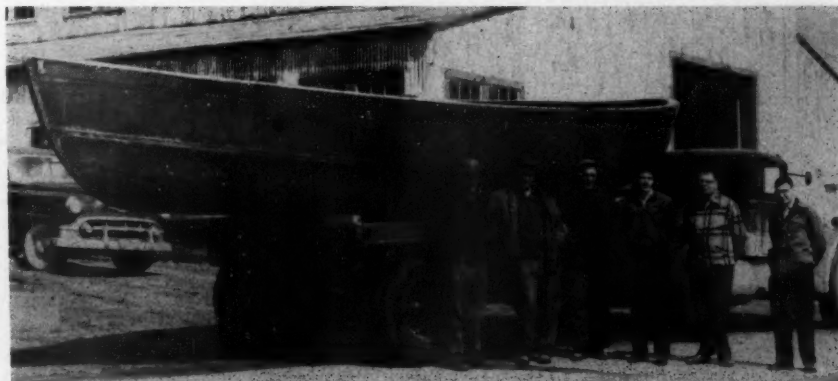
The *Paam* has a storage capacity for bulk fuel approximately equal to two railroad tank cars or five tank trucks, and at the same time is highly maneuverable to enable working among the berthed fishing vessels which are sometimes tied up four or five abreast. A uniquely designed skeg, which houses the 3:1 Twin Disc reduction gear, permitted placing of the 3,000-pound engine in the stern of the boat, saving fore and aft space and allowing maximum tankage in minimum over-all length. To provide the steering ability required in close quarters at low speed, the rudder is fitted with "fish tail" plates on either side which increase its sidewise thrust and permit sharper turns.

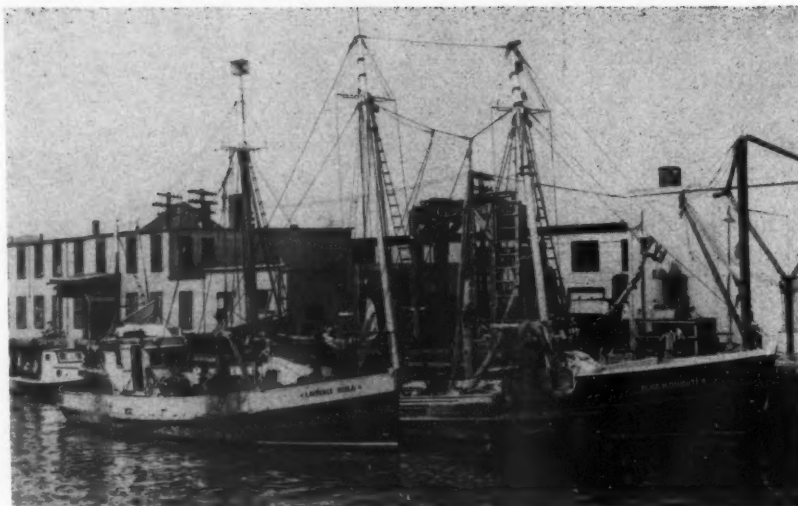
A large compartment in the bow of the new tanker is fitted with shelves which provide storage for miscellaneous products, such as cases of lubricating oil and boxes of filters. Saunders handles Esso lubrication products, Atlantic fuel oil; Fram, Wix and Purolator filters; and Eveready batteries.

The pilot house on the new tanker is unusually large, serving as an office and salesroom, with supplies being dispensed "over the counter." By removing four bolts, the whole house may be lifted off its rubber gasket,

(Continued on page 39)

New 31'6" steel seine boat which was constructed by Gladding-Hearn Shipbuilding Corp. for Tallman and Mack Fish Trap Co., Newport, R. I. Standing in front of the boat are, from left to right: Manuel, George and Arsen Mendoza of Tallman and Mack Fish Trap Co.; and Preston R. Gladding, Richard C. Hearn and George R. Duclos of Gladding-Hearn Shipbuilding Corp.





Unloading at Portland, Me., alongside Mid-Central Fish Co. wharf are the "Lawrence Scola", owned by Capt. Lawrence Scola, and The Harris Company's "Alice M. Doughty II".

Maine Boat Owners and Plant Operators Form Association

A new organization, Portland Fisheries Association, was formed at Portland, Me. early in April. It is comprised of fishing boat owners and fish plant operators, and membership is open to firms and individuals throughout the State of Maine.

The objective of the association is to aid the fishing industry, particularly in problems concerned with the operation of boats. It will support legislation that is in the interest of the business, and will promote projects designed to better the economic status of fish producers.

Bernard Harris has been elected president of the group; Capt. Harold Paulson is first vice-president; Capt. Otis Thompson, second vice-president; Capt. A. J. Pedersen, Portland Fish Co., treasurer; and Benjamin Thompson, secretary.

Suggest Minimum Prices for Herring

The executive board and officers of the Maine Coastal Seiners and Weirmen's Association met last month at Ash Point and proposed three suggestions for the members to adopt prior to the opening of the fishing season. These were:

- (1) A minimum price of \$1.14 per bushel or \$20 per hoghead for herring.
- (2) A minimum price of not less than \$20 per ton for sardines sold to fish meal processing plants.
- (3) Boats to be measured on a metered standard with fore and aft markings in holds to top of bulkhead.

The group also voted to propose for adoption the flying of a distinctive pennant by member boats. The pennant would have a black background with orange letters.

First Large Halibut Catch

The first large catch of halibut of the season was landed at Portland on April 8 by the dragger *Silver Bay*. An estimated 3,000 pounds of halibut were unloaded for Willard-Daggett Fish Co.

The volume halibut catch was made on the grounds known as St. Pierre, west of Newfoundland and 1,000 miles from Portland.

Open Way for More Government Sardine Buying

At the request of the Maine sardine industry, the U. S. Government has revised its Federal Specifications cover-

ing sardine procurement for the first time in 18 years. The revision was needed to bring the specifications up to date in concurrence with many changes and improvements in the over-all sardine packing procedures.

Several new can sizes, including a twelve-ounce institutional pack recently developed by the Maine industry, were added to the list of those which Federal agencies are now permitted to buy.

Building and Repowering

Makinen Bros. of South Thomas have completed a 32' lobster boat for Capt. Sam Archer of Spruce Head, powered by a Chrysler Crown engine with 2.5:1 reduction gear.

Capt. Wilfred Lloyd of Vinalhaven is having a 36' lobster boat built by Bunker's Boat Shop at McKinley, to be powered by a Chrysler Crown with 2:1 reduction.

The same type of engine is going into a new 35' lobster boat, built in Nova Scotia, and being outfitted by its owner, Capt. Thomas Watkins of Sea Island.

The 36' lobster boat owned by Capt. Harold Bunker of Matinicus has been repowered with a Chrysler Crown, with 2:1 reduction unit. All the engines were sold by Hunter Machine Co. of Rockland, which also installed a DTMR468, 108 hp. Buda Diesel for the Rockland-North Haven ferry boat.

Rockland Boat Shop of Rockland launched the 44' party fishing boat *Bingo IV* early in May for Capt. Knute Lovgren of Brielle, N. J. She has a Chrysler Royal engine with 2.5:1 reduction gear, turning a 26 x 20 Federal propeller. The yard is building a 32' oyster boat for Capt. Frank Strauch, Jr. of Lindenhurst, Long Island, and she will have a 120 hp. Gray engine.

Newbert & Wallace of Thomaston are building a twin screw 42' party boat for Capt. Henry W. Klimm, Jr. of Woods Hole. She was designed by Dwight S. Simpson and Associates and will be equipped with a pair of 4-cylinder, 110 hp. General Motors Diesels.

A Bendix MR-3 radar and APN-9 Loran have been installed on the trawler *Quincy* by The Harris Co. She is owned by Cape Trawlers Inc. of Portland, of which John E. Willard is president and Harold Paulson, shore Captain.

Seminar Program at McKown Point Station

A seminar program, usually Monday, beginning at 4:00 p.m. and ending at 5:00 p.m., has been initiated at the U. S. Fishery Laboratory at McKown Point, Boothbay Harbor, to provide a better understanding of marine research work through discussion and the exchange of ideas. Persons interested in attending the meetings may inquire of Frank Perkins at the Fishery Laboratory.

The relationship of State and Federal fishing programs was the subject of a talk given at the McKown Point research station last month by Sea & Shore Fisheries Commissioner Stanley R. Tupper. He stated that the only way to combat consumer resistance to any product is to start a dynamic advertising and marketing program.

In this connection he praised the National Fish Week Committee for its plans for a "1956 Fish Parade", which is expected to be the biggest fish promotion ever carried out.

Concluding his talk, Tupper reported that if we are successful in increasing fish consumption in the United States, we also must be sure that our citizens eat more fish caught by our own fishermen than is now the case. Only by adequate tariffs and the regulation and restriction of fish imports can this be accomplished, he said.

New 70-Foot Scalloper

"Stephen R" to Operate

Out of Provincetown

A NEW 70-foot scallop dragger, the *Stephen R*, joined the Provincetown, Mass. fleet last month. She is owned by Capt. Frank L. Reis, Sr. and his four sons; including Frank L. Reis, Jr., who is skipper. Another son, Arthur, captains the family boat, *Brother Joe*. Antone Martin is mate and Albert Fields, engineer, of the new craft. Mrs. Reis Senior performed the christening ceremony on April 16, while the blessing took place upon arrival at Provincetown.

The vessel was built by Harvey F. Gamage, Ship-builder, of South Bristol, Maine, from designs of Dwight S. Simpson & Associates, Boston. She is expected to be very steady and comfortable, and will be a good handling boat, particularly at fishing speeds. The new craft has ample working deck space for scalloping, and a large hold for her size. Capacity is 60,000 lbs. of iced fish in 1375 cubic feet.

A full bodied boat, with semi-cruiser stern, the *Stephen R* has beam of 18'6" and draft of 9'. Frames are 3" sided, double sawn, molded oak, spaced on 18" centers. Planking is 2" oak and decking is 2½" pine.

With bunk space for 11 men and 3000 gallon fuel capacity, the vessel will be able to stay at sea 12 days, fishing on any scallop grounds. She has two 10-foot scallop drags to work from both sides, and carries a 1353 Hathaway winch with 20" drums.

Engine Room Equipment

The new scalloper is powered by a Model DMM-6 Enterprise Diesel, rated 260 hp. at 800 rpm., with Snow-Nabstedt 2:1 reduction gear and Twin Disc front power take-off. The engine swings a 3-blade, 54-40 Style MI Columbian propeller on 4" Tobin bronze shaft, giving a speed of approximately 10 knots.

Auxiliary power is provided by a single cylinder FR-1

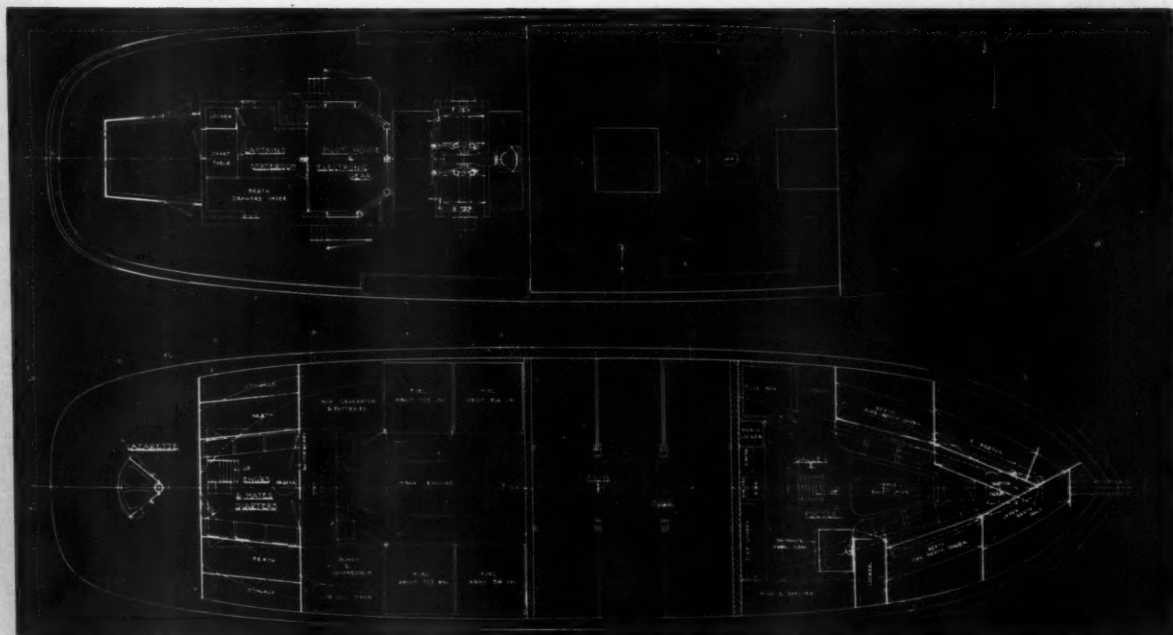
(Continued on next page)



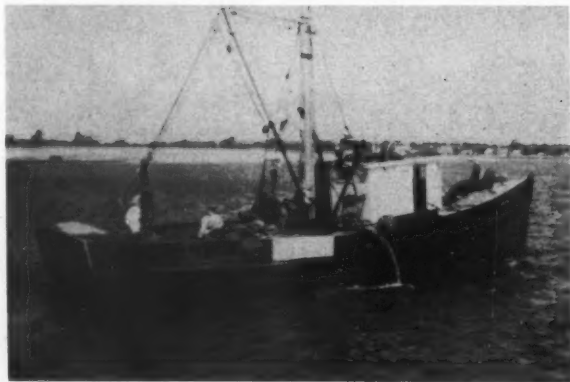
The "Stephen R", new 70' scalloper owned by Capt. Frank L. Reis, Sr. and his four sons, of Provincetown, Mass. She was built by Harvey F. Gamage, South Bristol, Me., and is powered with a 260 hp. Enterprise Diesel.



"Stephen R" launching party, including from left to right: Capt. Frank L. Reis, Sr., owner; Mary C. Reis, sponsor; and Frank L. Reis, Jr., skipper.



Deck and below deck arrangement plans of new 70' scalloper "Stephen R", designed by Dwight S. Simpson & Associates, Boston, Mass.



The 48' combination dragger and gill-netter "June Ellen", owned by Capt. Gus E. Jacobson of Point Pleasant, N. J. She is powered with a 165 hp. General Motors Diesel, and has Surrrette batteries, 38 x 28 Columbian propeller, Hathaway winch, Danforth anchor, Hudson American radiotelephone and Bendix depth sounder. K-ting rope and RPM lubricating oil are used.

Lister Diesel operating a 5 kw. generator and Marine Products pump. A Jabsco 1 1/4" bilge pump runs off the main engine, and there is an electric-driven Viking washdown pump. Batteries are HHG-21, 112-volt Surrrette, the anchor is a 150 lb. Danforth, and the hand deck pump is a 2 1/2" Edson model.

Lifesaving equipment consists of two 30" life rings, life jackets, and two 12" Beetle, 7-man Fiberglass life-boats, which have Styrofoam-filled buoyancy tanks.

Electronic gear includes RCA radar and radiotelephone, Raytheon "Fathometer" depth indicator, and two loran units. The dragger is equipped with 6" White Constellation compass, Clark Cooper air horn, 10" Carlisle & Finch searchlight, two 12" Crouse-Hinds floodlights.

There are 8 bunks in the fo'c's'le, and the galley has a #450 Shipmate oil-burning range and 500 gal. fresh water tanks. The after cabin contains two bunks, and the Captain's stateroom is in the deckhouse. All after quarters are heated from a #30 Shipmate oil-fired hot water boiler in the engine room.

Gamma is building a 40' combination commercial and party boat for Capt. Arne Peterson of Hyannis, Mass., which will be powered by a 6-71 General Motors Diesel.

New Jersey Conservation Department Reopens Several Oyster Beds

Several oyster beds in the State were re-opened early this month by the State Conservation and Economic Development Department. The list of areas which were opened on May 7 for the rest of the month includes Fitney Bit Bed, Great Bay, Middle River, Great Egg Harbor River and Tuckahoe River.

The State said exhaustive surveys showed that a renewal of the oyster harvest in these areas would not harm the beds. The harvest will be allowed with the proper permission and under existing regulations.

Landings up Ten Percent

Receipts of fish and shellfish at New Jersey ports during January totalled 3.4 million pounds, valued at \$700,000 to the fishermen. This was an increase of slightly more than 10 per cent over the same month a year ago, mainly caused by much larger catches of fluke.

Fishing success was generally poor during the first two weeks of the month due to bad weather, but production was better than normal during the balance of the month. An unexpected abundance of fluke during the latter part of January helped offset the poor fishing in the early part of the month.

Gloucester Firm Pioneers in Antibiotic-Ice Research

The Cape Pond Ice Co. of Gloucester has announced that it will join with Chas. Pfizer & Co., Inc., in undertaking an extensive antibiotics-in-ice research program. The 54-year-old ice company, with offices and plants at the edge of the harbor, will work with the New York firm in incorporating Biostat, a food grade antibiotic, into 300-lb. ice cakes. Biostat, which is a Pfizer product, extends the freshness time of fish by combating bacterial action.

Arrangements have been made by Cape Pond Ice Co. with various fish industries of Gloucester to conduct experiments on the use of Biostat in preserving fish. Biostat should prove an economic boon to the fishermen and the fishing industry, according to Dr. A. S. Malaspina, Pfizer researcher. "Not only will the use of this antibiotic permit fishermen to stay at sea longer and obtain greater quantities of fish, but it also will maintain the quality of fish sold," he said. He explained that Biostat can extend the freshness of fish 100 percent or more, and will allow a longer interval between catch and consumption.

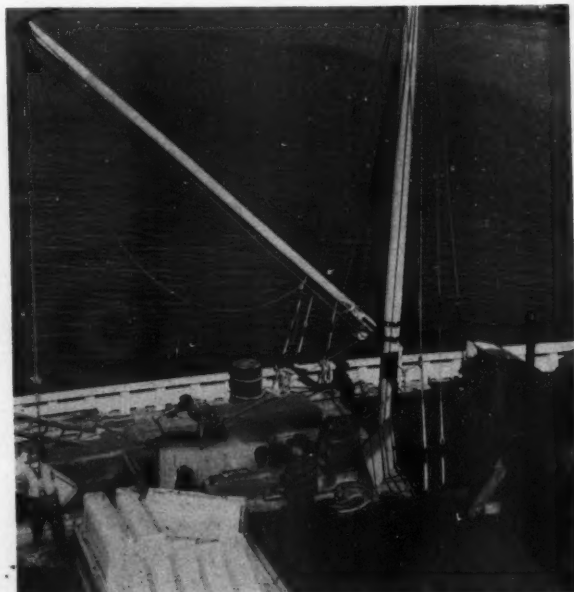
Cape Pond is equipped with the most modern icing equipment, and produces ice every day whatever the outside temperature. The plant is currently manufacturing about 150 tons of ice a day. There is storage space for about 2,000 tons of ice, and machines can crush 50 tons of ice per hour.

John Ryan is company president; his son, John W. Ryan, is vice-president; and James A. Ryan is treasurer.

Interview Boat Owners on Insurance Problem

Interviews of Gloucester boat owners got under way early last month, as a team from Boston University continued its investigation of the high cost of fishing boat insurance. They picked out about one-third of the registered boats in the Gloucester fleet as a cross-section sample.

The questions being asked are broken down into four



Lowering 300-lb. blocks of Biostat-treated ice into the hold of a New England fishing vessel. Biostat is a food grade antibiotic, produced by Chas. Pfizer & Company, and ice containing this chemical is being tested on several Gloucester, Mass. fishing vessels in connection with experiments by Cape Pond Ice Co. It is claimed that Biostat-treated ice will permit fishing vessels to stay at sea longer and obtain greater quantities of fish.



AT "STORMY WEATHER II" PRESENTATION CEREMONIES held in Warren, R. I. last month. From left to right: Governor Roberts of Rhode Island, F. Nelson Blount, president of Blount Seafood Corp., who gave the 83' vessel, shown at right, to the State for research purposes; and John L. Rego, State Director of Agriculture and Conservation.



groups. The first covers the general terms of the insurance contract. The second covers specific claims, the types of accidents, their causes and remedies. The third questions the various clauses in the contracts, and the fourth, the monetary stipulations—the premiums, amount of coverage, and limits of payment.

Big Early Whiting Trip

A new record for the whiting fishery came on April 14, when the *Eagle* hauled with 200,000 pounds. This was earlier in the season than usual for such a big trip.

"Holy Name" Gets New Equipment

The 81' dragger "Holy Name", owned by Capt. Joseph Curcuro of Gloucester, has been rejuvenated with a new 220 hp. General Motors 6-110 Diesel, sold by Hubbs Engine Co., Boston.

She also has new Bat Lavoie marine radar system and HHR-31 Surrette 32-volt batteries, installed by Louis Posner Marine Radio Inc. The vessel is one of the oldest craft in the Gloucester fleet, having been built in 1893.

Rhode Island House Passes Four Quahaug Bills

Rhode Island's House of Representatives unanimously passed on April 13 and sent to the State Senate for concurrence a "package" of four shellfish bills presented as a solution to the 20-year battle between quahaug tongs and mechanical dredges on Narragansett Bay waters.

Opening up Narragansett Bay to the dredgers, the bills would:

1—Give dredges area in the bay's east passage, between southern half of Prudence Island and Portsmouth mainland, between December 1 and April 1. Deep waters in Mount Hope Bay also would be opened to dredgers when and if that water is declared by the State to be free of pollution.

2—Empower the chief of the State Division of Fish and Game to open and close fishing areas for management and conservation purposes.

3—Make night shellfishing a felony subject to fines up to \$1,000 or imprisonment up to three years, or both.

4—Raise commercial quahaug license fees from \$1 to \$25; establish a \$5.25 fee for non-resident amateurs who do not own real estate in Rhode Island.

"Stormy Weather II" Donated for Research

The 83' boat *Stormy Weather II*, which Blount Seafood Corp. of Warren has donated for research, was accepted by the State at ceremonies held in Warren on April 6. Governor Roberts spoke to the group of legislators, State officials and leaders of fishermen's associations who attended the ceremonies. He urged support of the legislative program of the State Department of Agriculture and Conservation, to develop the production of Narragansett Bay to its fullest potential.

The *Stormy Weather II*, which is powered by two General Motors 6-71 Diesels, was accepted by the Governor after members of the fisheries committees of both branches of the General Assembly and State officials had taken a turn in the Warren River aboard the craft. Governor Roberts turned the boat over to John L. Rego, State Director of Agriculture and Conservation.

Other speakers at the presentation ceremonies included Fred Richardson, secretary of the Blount Corp., who said that enforcement of laws aimed at illegal shellfishing has improved, but that taking of undersized shellfish still constitutes the greatest threat to the local industry. "We must remember," he said, "that one bushel of this year's undersized will be 7 bushels of littlenecks next year."

Mr. Richardson said the Blount Corp. can use all the quahaugs it can get, and that during the gluts of last year and early this year, which were caused by heavy activity at Nausauket and Allen Harbor, his company did not lower the prices it paid.

Preceding the Governor on the speaking program was Walter L. O'Neill, sea food purchasing manager for the Campbell Soup Co., who said that Narragansett Bay quahaugs produce the best flavored chowder in the world.

Other speakers were Byron Blount, vice-president of the Blount Seafood Corp., and F. Nelson Blount, president. Mr. Rego was toastmaster.

Weather Causes Drop in Landings

Landings of fish and shellfish at Rhode Island ports during January amounted to 2.4 million pounds, valued at \$187,000 to the fishermen. Landings of practically all species, with the exception of butterfish, were well below the receipts reported for January of last year. Adverse weather conditions caused a loss of about ten possible fishing days during the month.

Hard clams continued to lead all other seafood items in total value, with 174,000 pounds of meats worth \$80,000. Sea scallops brought the highest price to the fishermen—61 cents per pound.

Oregon Releases Salmon In Several Rivers

Some 100,000 spring chinook salmon of the 1954 brood stock were released last month into the McKenzie River below the intake of the power canal at Walterville. These fish are from the McKenzie salmon hatchery, and average 15 to a pound.

Also released from the Sandy River hatchery into the Sandy River near Dodge Park were some 130,000 fish, including both steelhead and silver salmon. The silver salmon average 11 to a pound, while the steelhead weigh about 15 to a pound.

Some 600,000 silver salmon recently were released into the Klaskanine River from the Klaskanine hatchery. These fish averaged 10 to a pound, although they varied in size from 7 to 14 to a pound.

Also released were some 100,000 silver salmon averaging about 10 to a pound, which were planted in the South Coos River at Dellwood, Ore. Approximately 77,000 silver salmon, averaging 12 to a pound, were released into Foley Creek from the Nehalem River hatchery.

In Eastern Oregon, 26,000 spring chinook salmon averaging 20 to a pound were released into the Metolius River from the Metolius River salmon hatchery.

Late last month 675,000 spring chinook salmon were liberated from the Marion Forks Hatchery near Stayton. They were released in the North Santiam River below Big Cliff Dam. These chinook salmon of 1954 brood stock have been reared 376 days and weigh about 20 to a pound.

Columbia River Opened to Fishing

The commercial fishing season on the Columbia River opened at noon on April 30. Below Bonneville Dam the commercial fishing season will continue to 6:00 A.M. on May 27, and above Bonneville Dam to noon on May 10.

Fishing in the River will be definitely limited in the Celilo area by high water flow, which was about 500,000 cubic feet per second the latter part of April. Water flows above 300,000 cubic feet per second eliminate commercial gill-net fishing in this area.

Ten Mile Lake Is Good Silver Salmon Producer

Ten Mile Lake near the Oregon coast north of Coos Bay is producing a tremendous population of silver salmon—a calculated 77,500 fish entered the lake system. This total consists of 41,500 adults and 36,000 jacks, and is greater than the total run of spring chinook into the



The 40' x 13' x 5 1/2' troller "Ida W. II", owned by Wuon and Son, Astoria, Ore. She fishes for salmon and tuna, and is powered with a 140 hp. Chrysler engine.

Willamette River since 1946 in any year except one.

The study revealed Ten Mile Lake is more productive than any other major coastal stream.

Biologists Studying Smelt Runs

Biologists of the Oregon Fish Commission and the Washington Department of Fisheries are sampling runs of smelt entering the Sandy and Cowlitz Rivers to aid in learning more of their life histories.

Several hundred of the small, silvery fish from the various tributaries of the Columbia River were sent to Dr. Allen DeLacy of the School of Fisheries of the University of Washington at Seattle for "racial studies".

In statistical studies, differences in the characteristics between one group of smelt and another may distinguish various races of fish and answer questions now perplexing the fish scientists.

California Whaling Industry Revived

Whaling is being resumed off the California coast for the first time in some 10 years. The Del Monte Fishing Co. at San Francisco announced recently that it has leased a former sardine plant in Richmond, has chartered two killer boats, and will operate in grounds off the Farallon Islands, 20 miles west of the Golden Gate. The company is operated by Otto Weissich, whose firm also has an operation based at Vancouver, B. C.

The harpooned whales will be towed into the plant in San Francisco Bay, where they will be cut into fillets, quick-frozen and shipped for use in cat and dog food and for hog feed. The oil will be exported to England.

The whaling season is from May 1 to October 1 for most types of whales. Increased numbers of whales have been noted off the California coast in recent years.

Untapped Tuna Resource in Mid-Pacific

Fish & Wildlife Service biologists meeting in San Diego last month for the 7th annual session of the Pacific Oceanic Fisheries Investigation (POFI), pictured a big opportunity for tuna fishing in the mid-Pacific south of Hawaii. They reported that there are large, untapped quantities of skipjack tuna throughout the central Pacific. This vast resource is now being harvested only to a limited extent by mainland and Hawaiian-based fisheries.

The scientists believe that Midway Island might well become a base of operations for fishing skipjack, yellowfin and albacore tuna in areas not yet exploited. Researchers also have found extensive supplies of small albacore in the North Central Pacific south of the Aleutians and in an area about 300 miles off the coasts of California and Oregon.

In order to make tuna fishing more practical in the mid-Pacific, the POFI has developed a new method of long-lining in which four or five men can fish 1,200 hooks a day. A continuous cotton line is used, being coiled and fed over the stern from a big, revolving tub mounted on the afterdeck. It is predicted that with this equipment, four or five men can land 3 1/2 tons of hooked tuna every day.

Two Vessels Have Mishaps

A fire at sea on a purse seiner and the capsizing of a tuna clipper occurred recently. On March 26th the 530-ton San Diego tuna clipper *Sun Dial* suddenly overturned and sank off the coast of Mexico near Puerto Vallerto, 800 miles south of San Diego.

All 16 crew members and the captain, Philip Ojena, were rescued by another San Diego clipper. The vessel was owned by G. W. McHenry.

A crew of three San Pedrans were rescued off Malibu, Calif. when their purse seiner *Vivian A.*, out of Monterey, caught fire. Rescued were Salvatore Arancio, owner and skipper, and his crewmen.

The fire burned the main deck to the water's edge, but the hull was reported intact. Loss was estimated at about \$60,000.

Tuna Landings Show Increase

Southern California tuna landings January 1 to April 14 were 53,100 tons, 32 percent more than last year. Receipts of albacore in that time, however, were only 3,600 tons, a decrease of nearly 60 percent.

Arrivals of frozen albacore from Japan for canning in this country, were only 3,700 tons during the first quarter of 1956—less than half of what was imported a year ago.

Several Boats Change Hands

Boat sales were brisk in the Monterey Bay area prior to the opening of the salmon season May 1. Ralph Phillips of Costa Mesa purchased the 43 ft. northern troller *Whitecap* from partners Connie Shor and Burnis O. Benny. Phillips will use the *Whitecap* for salmon and albacore fishing from northern California to Mexico.

Sal Balesteri of Monterey has sold the twin screw 38 ft. boat *Perch* to Alfred Frenz of Berkeley. She was originally a Fish & Game survey boat.

Pete Anderson of Moss Landing is the new owner of the troller *Venture II*, purchased from Mrs. Gunnar Mord of Chula Vista. The *Venture II* is powered by a Caterpillar D318 engine.

Jack Norman bought the *L.C.F.*, owned by the Pelican Bay Cold Storage Co. of Alaska.

Plan Salmon Tagging Program

John Farley, head of the Fish & Wildlife Service, announced in a recent visit to San Diego that an extensive salmon tagging program is planned for North Pacific waters this Summer. It will be done by the University of Washington.

One object of the tagging will be to determine what percentage of fish caught west of the 175th meridian in areas fished by the Japanese, is from stock spawned in American waters.

Cut Price of Canned Tuna

Prices were cut on canned tuna by two major canneries last month, as San Pedro's fishing fleet prepared to resume operations after the seasonal doldrums. Star-Kist Foods, Inc. and Van Camp Sea Food Co. both announced a reduction in canned tuna prices of \$2 a case. Star-Kist also announced its tuna fleet would begin sailing immediately on a "rotation" plan that calls for vessels to be in port about 20 days between trips.

President Gilbert Van Camp said his firm cut prices in face of the pressure of competition, particularly that of



The "Westport", new 127' steel tuna clipper which will fish for Breast-O-Chicken out of San Diego, Calif. She was constructed by National Steel and Shipbuilding Corp., San Diego, and is powered with a 960 hp. Fairbanks-Morse opposed-piston Diesel.

imported fish. Star-Kist president Joseph J. Bogdanovich said the cut was motivated principally by a desire to increase tuna consumption in the United States.

Transplant Red Abalones

The Fish & Game Department transplanted 660 red abalones along the rocky shores of Catalina Island this season. If the experiment works, this may prove a practical method of establishing abalone populations in likely spots not currently inhabited by the prized shellfish.

New Tuna Clipper "Westport" Joins Fleet

National Steel and Shipbuilding Corp., San Diego, recently completed the sixth in their current series of modern high-speed tuna clippers. Christened the *Westport*, the 127' vessel will fish for Breast-O-Chicken out of San Diego.

Moulded beam of the new tuna clipper is 30'6", while moulded depth is 14'6". The hull is all-steel, electrically welded, and features a longitudinal framing system. The hull form is the result of extensive model test studies, and the rudder design features one of the recent high-speed N.A.C.A. airfoil shapes.

The main engine on the *Westport* is a Model 38D8½, 6 cylinder opposed-piston Fairbanks-Morse Diesel, which develops 960 hp. at 720 rpm., and is direct reversing. Auxiliary Diesels are of Murphy manufacture, and deliver 191 hp. for continuous duty service at 1200 rpm. There is a 125 kw. Electric Machinery Mfg. Co. generator, and the refrigeration plant consists of four Worthington 6" x 6" ammonia compressors, each driven by a 30 hp. electric motor. A Sperry Magnetic Compass Pilot provides automatic and manual steering, driving through a National Steel worm gear unit.

The new tuna clipper has a fish capacity of 340 tons, while fuel capacity is 48,551 gallons. Her fresh water tanks hold 4,000 gallons, and lubricating oil capacity is 1,600 gallons. The vessel has quarters for 15 men, including the Captain.

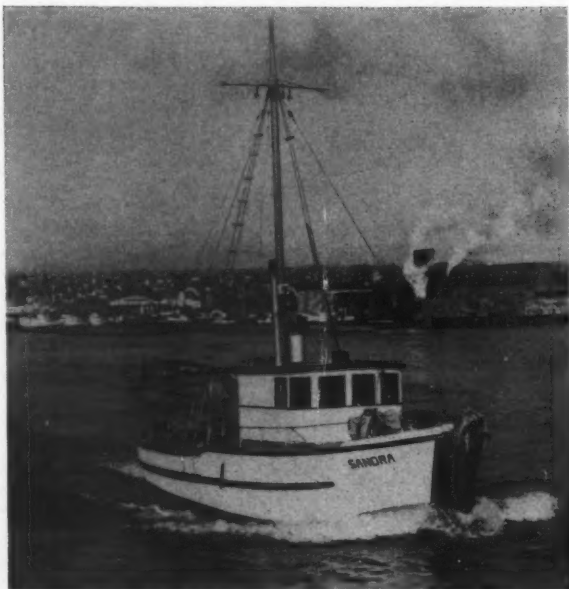
Sportsmen's Salmon Catch Termed Threat

The number of salmon reported hooked by Northern California sport fishermen in 1955 totalled 130,000, which is more than a 50 percent increase since 1950. Commercial fishermen call it a threat to their livelihood.

The 1955 sport catch was 91 percent king salmon, 8 percent silver salmon, and the remaining one percent, pink salmon.



A load of Dover sole being transferred to the Lazlo dock from the drag boat "Dorene B", skippered by James Riley of Eureka, Calif.



Capt. Waino J. Bloom's salmon troller "Sandra" of Seattle, Wash. is powered with a 6-cylinder, 105 hp. Model JF-6-M Cummins Diesel. The engine swings 36 x 24 propeller through 3:1 Capitol hydraulic marine gear to give the "Sandra" a top speed of 9½ knots.

Washington Research Vessel Makes Good Shrimp Catches

Good catches of "cocktail-size" pink shrimp were made off the coast of Washington by the Fish & Wildlife Service's vessel *John N. Cobb* during a four-week cruise which ended April 20. Best fishing areas yielded shrimp at the rate of 2,000 pounds per hour off Grays Harbor, and fairly consistent catches of 500 pounds or more per hour were made in several areas with a Gulf of Mexico shrimp trawl.

This trip showed excellent prospects for development of a commercial shrimp fishery off the Grays Harbor area. Most productive depths were from 65 to 85 fathoms, both north and south of the entrance to Grays Harbor.

The Gulf shrimp trawl, used for the first time in this region as far as is known, proved to be from two to three times as efficient as the beam trawl. The gear caught only small amounts of fish, mostly species not considered as food fish.

An experiment in holding the fresh whole pink shrimp on ice was carried out aboard the *John N. Cobb* over a 6-day period. Although final technological tests are not yet completed, preliminary examination indicates that the shrimp can be held several days on ice with no apparent damage to the meat.

One commercial fisherman from Westport was in close contact with the *Cobb* and rigged his vessel for shrimp fishing. It was understood he was out testing his gear and brought in about 125 pounds of shrimp. This was believed to be the first commercial catch of shrimp landed at Westport.

Fingerling Salmon Being Marked

Several women in Underwood have been engaged in tattooing fingerling salmon so that conservation specialists can estimate how many survive the downstream trip past McNary Dam on the Columbia River. In all 720,000 will be marked.

The fish are placed in an anesthetic so that they are numbed during the operation. Then they are placed upside down against a jigsaw-like electrical machine which

holds a cluster of seven needles. The needles carry pigment just under the skin and leave a round spot on the fish's back about 1/16 of an inch in diameter.

To Continue Alaska Canning Operations

E. E. Willkie, president of Pacific American Fisheries of Bellingham, says that the firm expects to operate in Alaska this year substantially the same as last. No operations will take place in Puget Sound, where no run is expected this year, but canneries will be operated at King Cove, Port Moller, Bristol Bay, with fishing operations at Squaw Harbor, Excursion Inlet, Alitak and Snug Harbor.

Invited to Inspect Fish Resources

Fisheries Minister James Sinclair has revealed that he has extended an invitation to Russia's Fisheries Minister Ishkov to visit Canada and inspect its fish resources on both the Atlantic and Pacific Coasts. Sinclair said he felt certain that Ishkov would accept the invitation to visit in August, when the great salmon migration into Fraser River is at its peak.

Frozen Crab Packaged in Polyethylene

Cooked and frozen crab packaged in polyethylene film has been introduced by Ivar Wendt, Seattle food broker and canner. The film used is Visqueen "C", manufactured by The Visking Corp., Plastics Division, Terre Haute, Ind. It is specially treated so that ink will permanently adhere, allowing permanent printing on the package.

Seattle Otter Trawl Landings for April

Fifty-three trips were landed by the Seattle otter trawl fleet during April, and 1,456,000 lbs. of fish were unloaded. This was about 150,000 lbs. less than in the previous month, and nearly 300,000 lbs. lower than production during April, 1955. Rockfish was the top variety, with 364,900 lbs., followed by true cod, with 340,200 lbs. The rockfish catch was practically the same as last April, but true cod landings were down about 400,000 lbs. Dover sole production was up about 50,000 lbs. over April, 1955.

Georgia Shrimp Are Scarce But of Good Size

No real good catches of shrimp had been made up until the middle of last month, but there were plenty of indications that the run would be much better from then on. While shrimp were not being caught in large numbers, those that were brought in by boats were of good size.

Not all of the boats were fishing last month, many of them waiting for a better supply of shrimp and more favorable weather. About the middle of last month a huge shrimp weighing about a sixth of a pound was caught by the *Big Shot*, skippered by Capt. Tony Corujo and owned by Paul Moreira.

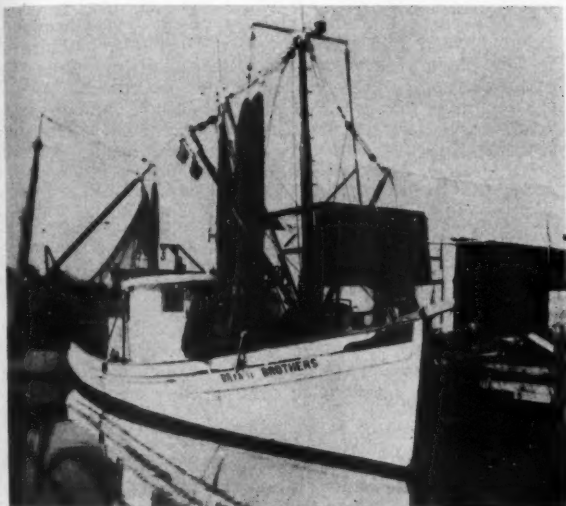
Hard Crab Landings Show Gain

Landings of fish and shellfish at Georgia ports during February amounted to 717,000 pounds. Shellfish items accounted for 88 percent of the total production, with finfish making up the remaining 12 percent.

Hard crab receipts led all other items landed during the month, and were far greater than those reported for the previous month. Shrimp was in second place, followed by shad and oysters.

SeaPak Corp. Names Officers

The directors of SeaPak Corporation of St. Simons recently announced the election of the following officers: Benjamin O. Johnson, president; W. F. Cummings, general manager; J. Roy Duggan, vice-president; J. J. Meadows, vice-president; and Edward L. Parker, secretary-treasurer. Edward Baxter was appointed as merchandising manager.



Capt. Fred Bates' 50' shrimp trawler "Bryant Brothers" of Palacios, Texas. Her equipment includes 165 hp. General Motors Diesel, Willard batteries, 36 x 28 Michigan propeller, Roebling wire rope, Linen Thread Co. Gold Medal netting, Stroudsburg hoist, Northill anchor and Bendix depth sounder. The vessel is finished with Woolsey paint, and uses Columbian rope and RPM Delo lubricating oil.

Texas Shrimpers Using New Two-Trawl System

When larger shrimp trawlers with increased engine power began to take over the shrimping duties along the Gulf coast, it was found advisable to increase the size of nets also. A trawl with a 40' to 50' opening used on smaller boats, gave way to very large trawls having from 90' to 125' openings. These nets were expensive to build, and damage and loss were serious problems.

Consequently, a new rig was tried by several Texas shrimpers. They took two of the short trawls and bridled them to drag as one unit. Their experience was noted by other shrimpers, and now the stock pile of small trawls has almost vanished.

Proponents of the two-trawl plan claim that the first cost of two small nets is less than that of one large one, since smaller webbing can be used. When using two nets and one becomes damaged, the torn net can be removed and repaired, or a new section installed with less effort and expense than that involved with one large net.

Laguna Madre Harbor Improvement Project

A big harbor improvement project is under way at Laguna Madre. It will consist of a nine-mile deep-water channel from Port Mansfield turning basin on Laguna Madre, due east across Padre Island to the Gulf of Mexico. The channel will be 250 ft. wide at the top, 100 ft. wide at the bottom and from 14 to 18 ft. deep.

The project also will include a new turning basin at Port Mansfield, to be 1,000 by 1,200 feet in dimension, as well as a shrimp, fishing and pleasure harbor, 850' by 350', and a shrimp basin 2000' by 350'.

Shrimpers Hampered by Weather

Since weather plays a major role in shrimp trawling operations, it has had a marked effect on shrimp production since the first of the year. Old-time fishermen agree that there have been more high winds, squally, stormy and rough weather this year than ever before.

Night shrimping along the middle coast has brought from 300 to 500 pounds per boat. Two Brothers at Ingleside have a fleet of medium-sized trawlers which work whenever possible, but smaller boats have been tied up.

In Galveston Bay and along the upper coast, fair catches of large white and brown grooved shrimp have been taken. Only scattering trips to Campeche and the deep south Gulf have been possible.

Shrimp landings for the 30-day period ending April 25 dropped below a million pounds (heads-off) for the first time since trawling in the south Gulf began several years ago. Aransas Pass and Brownsville areas showed the largest production.

Edible finfish production from the bay areas was average, with an abundance of black drum. The catch of red drum amounted to 31,000, and speckled sea trout accounted for 36,300 pounds. Flounders and other varieties brought bay fish production to 136,900 pounds.

Red snapper fishing was hampered by heavy seas. Reported catch was 76,000 pounds, making a total edible finfish yield of 212,900 pounds.

Alabama Plants Record Amount of Seed Oysters

The oyster season in Alabama waters officially closed on May 1. B. B. Larrimore at Bayou La Batre, in making the announcement, revealed that the planting of 40,000 barrels of oysters off Mobile and Baldwin County shores has been completed. This 40,000 barrel operation amounts to more seed oysters than have been planted in the past four years together. A force of 100 men and 100 boats planted the seed oysters in the waters of Portersville, Heron, and Bon Secour Bays, Klondike and McKinsey Reefs and Fowl River.

Some Alabama waters were ordered closed to oyster tonging on April 6, due to pollution. These areas are in Mobile Bay, Heron Bay and Bon Secour Bay. Restricted sections probably will not be reopened before next Fall.

Artificial Fishing Banks Created

From the Alabama Dept. of Conservation comes the report that approximately five miles off the Alabama coast, in waters of the Gulf of Mexico where there is no navigation hazard, there have been dumped several hundred junk car bodies in piles of 100. This project was started on the theory that small sea life would accumulate on these artificial banks and attract small fish which in turn would draw red snapper and other salt water fish.



The 40' shrimper "Sandpiper", owned by Capt. Hilary P. Clarke of Bayou La Batre, Ala., and powered with an 81 hp. engine with 2:1 Twin Disc reduction gear and 34 x 24 Columbian propeller. Other equipment includes Wickwire wire rope, Linen Thread Co. Gold Medal nets, Northill anchor and RCA radiotelephone. She is finished with Henderson & Johnson paint, and uses RPM lubricating oil.



42' all-steel fishing tug owned by Capt. E. W. Bodin of Bayfield, Wis., and powered with a 50 hp. Kahlenberg engine. She has Danforth anchor, Pentwater net lifter, and is finished with Rust-Oleum paint.

Great Lakes Fishermen Want Walleye Ban Lifted

Commercial fishermen in the Lake Superior area recently asked the Wisconsin Conservation Commission to lift its ban on commercial fishing for walleyes in that lake. The fishermen requested seven years of fishing walleyes 16 inches and over, but the Commission tabled the matter, and it is thought unlikely that any action will be taken on it this year. The walleye ban, which was put into effect some months ago, was the result of arguments by sport fishermen that walleyes are game fish and should not be fished commercially.

Richard Bodin of Ashland told Commission members that commercial fishermen have been adversely affected by the removal of brown trout from the commercial list, the loss of the Sioux River fishing grounds, and the serious inroads of sea lampreys on lake trout. And now, he pointed out, there is the ban on taking walleyes, which during the late Summer months make up as much as 90% of the commercial catches.

Bodin believes that the public is being deprived of a supply of food customarily furnished by the commercial fishermen, and says it is bad publicity for a State noted for its fishing to have Canadian-caught walleyes served in resorts and restaurants.

The walleye is a commercial fish in Lake Michigan, and Michigan and Minnesota permit netting of the fish in the Great Lakes.

Making Good Spring Catches

In the Great Lakes region during mid-Spring practically all varieties of fresh-water fish were in good production, with supplies arriving at markets ranging from liberal to heavy.

Commercial fleets from Lake Superior were taking somewhat improved catches of lake trout, particularly in the Wisconsin and Michigan areas of the lake. Catches of whitefish in the big lake by trap netters showed improvement over the previous month, and the Spring yields should prove impressive. Lake herring hauls were generally fairly good.

In the Green Bay area fishermen were getting fairly good yields of walleyes, herring, perch, carp, chubs and lake smelt. Farther south in the bay area, commercial operators got good quantities of carp, perch, sheepshead.

Lake Michigan fleets were getting lots of chubs, perch, and fair herring takes. Chicago netters were catching fairly good quantities of lake chubs, most of which went to the smokers. In the straits area commercial netters reported fair to better takes of herring and smelt, bullheads, sheepshead, etc.

Yellow pike yields showed improvement in some areas of Saginaw Bay on Lake Huron, and commercial fleets out of Bayport, Mich. were getting good catches of catfish, herring suckers, etc.

On Lake Erie, Ohio fishermen were getting impressive catches in trap nets of yellow pike. Blue pike catches in the New York area of Lake Erie were fair, and takes of "rough fish" were in good commercial quantities.

Commercial fish production from Lake Ontario was somewhat higher than the previous month, with lots of sheepshead, sunfish, white bass, etc., from traps.

Electrical Barriers Most Effective

A temporary scientific committee appointed by the International Great Lakes Fishery Commission recently reported that the electrical barrier across lamprey spawning streams is the most effective device for controlling the predator.

However, the electrical charge kills only adult lampreys as they ascend streams tributary to the Great Lakes to spawn. The young are unharmed, and research now is going on to find methods to destroy them.

Fishing Tug Freed from Ice

The fishing tug *Sea Scout*, operated by Eino Tuomala and Emil Tormala, was locked in an ice field near Marquette, Upper Michigan, for five days the second week in April. The craft was being brought to Marquette from its Winter berth at Portage Entry.

It drifted six miles into Marquette's lower harbor with the ice field, finally being left sitting high on a 20-ft. thick cake of ice. Coast Guardsmen managed to work their way to the tug and slowly whittle the ice away from it.

Ohio Landings for March

In the first of a series of bulletins issued by the Fish & Wildlife Service, landings of fish at Ohio ports during March were reported as totalling nearly 815,000 pounds. Carp led all other items landed, followed by yellow pickerel, yellow perch and white bass. These four species accounted for 85 percent of the month's total landings.

Handles Over Million Pounds Fish

Schwarz Fish Co., purchaser, processor and distributor of Great Lakes fish, located in Sheboygan, Wis., handled more than a million pounds of lake fish last year. These consisted mostly of lake perch, walleye pike, whitefish, trout, chubs, etc.

The firm specializes in smoked, dried and pickled fish processing, and has several retail fish markets in Wisconsin towns, in addition to its wholesale facilities.



Capt. J. F. Damon's 47' trawler "Sirod" of Georgetown, S. C. She is powered with 50 hp. Caterpillar Diesel with Twin Disc 3:1 reduction gear and Hyde propeller, and has Surtette batteries. The vessel is finished with Woolsey paint, uses Esso fuel and lubricating oil, Linen Thread Co. Gold Medal nets and Columbian rope.

Florida Filling and Dredging Projects Opposed by Fishermen

Fishermen claim that filling and dredging activities on Florida's West Coast in the vicinity of St. Petersburg would damage the fisheries and seriously jeopardize the economy of the entire State, if not regulated. Ernest Mitts, director of the State Board of Conservation, recently arranged for a study to be made of the situation, following local opposition to projected construction of causeways and bridges to make near-by keys accessible from the mainland.

It was pointed out that in Boca Ciega Bay, protected animal habitats, breeding and feeding grounds for marine animals, sports and commercial fishing (including bait shrimping) are decreasing. This decrease is claimed to be mainly the result of filling and dredging operations which have been carried out in the bay.

Between 80 and 90% of the bait shrimp fishing in Boca Ciega Bay would be eliminated if proposed filling and dredging operations are carried out, it is said. The bait shrimp catch in the bay in question is worth an estimated \$170,000,000 annually to fishermen, and an estimated 1,186,900 pounds of fish were taken there in 1954.

Cites Ways to Increase Fish Sales

Barton Westerlund of the University of Miami Marine Laboratory recently pointed out that the Florida fishing industry, excluding the shrimp segment, has made only casual attempts to offer the supermarket customer a packaged product, and has expended little effort to improve the quality of products being distributed.

He suggested three steps that might be taken to increase sales: Make sure only top quality fish reach the market; package and process fish into fish sticks, fillets and other innovations for the frozen food trade; and provide adequate advertising and promotion.

Would Ban Commercial Fishing in Lake County

The South Lake Waterways Club of Clermont has voted to ask the Legislature to prohibit all commercial fishing in Lake County. The vote to seek a ban on commercial fishing in Lake County included a request that laws be enacted making it a felony to possess seines, traps, electrical devices and other equipment associated with illegal fishing.

Bell to Have New Freezer

Harry H. Bell & Son, well-known wholesale and retail fish dealers of Pass-a-Grille on the Gulf of Mexico near St. Petersburg, have contracted for a \$200,000 fish freezer to be erected in St. Petersburg. The new building, which is to be started this month, will measure 185 ft. by 140 ft., and will have freezing capacity of 50,000 pounds a day and holding capacity of 5,000,000 pounds.

While specializing in mullet and mackerel, the firm is active in shrimping, having three 75-ft. trawlers which work out of Bayou La Batre, Ala.

Studying St. Johns River Fishing

A total of 41 different species of fish were collected in a 10-day study of fishery resources in the St. Johns River system, which was concluded recently. Included in the total were 28 species of fresh-water fish and 13 species normally classified as salt-water fish. The study was started to find a solution to the sports versus commercial fishing dispute in the River.

Aquafoods Corp. to Use Vacuum Fish Package

A new vacuum package which is being introduced under the Carnation trade name by Jaxon O. Hice, president of Aquafoods Corp., Tampa, may provide the answer to problems of marketing seafood, both fresh and frozen, in modern self-service supermarkets. Hice claims the new vacuum package overcomes a great many of the problems connected with fresh fish marketing, such as spoil-



The 67' shrimp "Ebb Tide", owned by Sahiman Sea Foods, Fernandina Beach, Fla. She was built by Diesel Engine Sales Inc., St. Augustine, and is powered with D342 Caterpillar Diesel with Twin Disc 3:1 reduction gear and 48 x 36 Columbian propeller. Her hold is insulated with Styrofoam, and the vessel is equipped with 3" Tobin Bronze shaft, Goodrich Cutless rubber stern bearing, Onan generator, Surrrette batteries, and Hathaway No. 72823 shrimp hoist with three drums.

age, odors, icing, weighing, and wrapping. The vacuum package also makes it possible to display frozen seafood products under normal refrigeration where they do not compete with the limited space available in frozen food bins.

The new fish package was developed by the Standard Packaging Corp. out of a synthetic material, Mylar, a product of the Dupont Corp.

South Carolina to Permit Seed Oyster Exports

The South Carolina Legislature last month passed an act which makes it legal to cultivate seed oysters in South Carolina for export. The law, as set up, encourages the use of polluted grounds for seed purposes, since the seed would be moved when very small. They would then have ample time to cleanse themselves before reaching marketable size.

The act specifies that oysters to be exported as seed may not be over 1½ inches. The tax to ship seed oysters out of State has been established at 2¢ per bushel.

The Governor was expected to sign the legislation promptly and if he does, it is possible that some seed for export may be produced in the State this Summer.

New Law Sets Inshore Shrimping Season

Shrimp trawling in South Carolina's harbors, sounds and some rivers was authorized for an annual four-month period last month when Gov. George B. Timmerman signed an act passed by the 1956 General Assembly. It would permit trawling in Charleston Harbor from the city to the ocean.

The act opens Charleston Harbor, Bull's Bay, Winyah Bay, St. Helena Sound, Port Royal Harbor and Calibogue Sound to shrimping between August 15 and Dec. 15. It also permits trawling in the North Edisto River as far inland as Point of Pines, near Rockville.

The act removes trawling restrictions hitherto imposed off residential beaches along the coast during the four-month period. In Charleston Harbor, the act permits trawling ocean-ward of a line from the mouth of James Island Creek northeastward to the Battery and then to the southwestern end of Hog Island, just north of Mount Pleasant.

**"155 hp
NORDBERG KNIGHT
runs like a million dollars"**

... says Joe Barcott
of Everett, Wash.

Here's another vote of confidence for Nordberg Gasoline Marine Engines in hard-working fishing service:

The 31-ft. gillnetter *MELINDA*, owned and operated by Joe Barcott of Everett, Wash., is ably powered by a husky 155 hp Nordberg *KNIGHT* with a 2 to 1 reduction gear.

Designed by Edwin Monk and built by Northwest Boat Shop in Everett, *MELINDA* is used for salmon fishing in Puget Sound on an average of 60 hours per week. Here's what her owner-skipper has to say about the performance of his Nordberg *KNIGHT*:

"... engine runs like a million dollars—I'm well satisfied with its performance."

Want the best power for your fishing vessel? Then specify **NORDBERG** engines... from 60 to 155 hp. Mail the coupon for catalog.

Nordberg Gasoline Marine Engines are built in 7 heavy duty models for fishing service, from 60 to 155 hp. 4 reduction gear ratios available, and hydraulically-operated reverse and reduction gears are optional on most models.

NORDBERG

GASOLINE MARINE ENGINES

MAIL COUPON NOW

NF

NORDBERG MFG. CO., Milwaukee 1, Wis.

Please send literature on Nordberg Gasoline Marine Engines.

Name _____

Address _____

City _____ Zone _____ State _____

© 1956, Nordberg Mfg. Co.

G256F

Stern Trawl Proves Successful On British Factoryship

Experiments by British inventors and trawling companies in the development of factory-type fishing trawlers have proven the practical value of the stern trawl, now in use on the factoryship *Fairtry*. The system of bringing the trawl up through a stern chute was developed to overcome the difficulties encountered in using the conventional side trawl on a high-sided ship. The *Fairtry*, launched in 1953, has been reported to have been uniformly successful in bringing back good catches.

Re-designing the net gear was a corollary of the new trawling system. Among other improvements, the normal otter boards were replaced with "parotters". This type of otter board has curved surfaces which impart a far greater thrust to the mouth of the net without a resultant downward pull. Unlike the conventional otter boards, they do not drag across the sea bed. The principle is the same as in the paravane designed for mine sweepers.

A new Fishing and Research Company has been formed to further the development of the stern trawl, and experiments are being carried out on the *Benvolio*, the Hull trawler that also has been experimenting with an electronic mid-water trawl. The fishing company has placed an order for a 255' stern trawling vessel which will be equipped with the new trawl.

In a summary of his impressions of the stern trawl and the advantage a distant water vessel would have if equipped with one, one of the partners in the new Fishing and Research Company states: "The crew are under cover during the major part of the hauling operation and totally so during gutting and other processing work. Fewer men are needed on deck actually to guide the net aboard. Stern trawling is a more flexible system and with the new electronic mid-water trawl which has been developed, less damage is caused to the nets, together with bigger catches.

"In addition, the ship gains more stability. It is therefore a better fishing platform, and in heavy weather can continue on the fish since the vessel is headed into the wind with the trawl trailing over the stern.

"Side trawling for distant water vessels is outmoded in the light of the new development. The future lies with the factory class of vessel where the whole catch is processed immediately."

Extension of Territorial Limits

(Continued from page 18)

sell to that country, and it is a well known fact that the net balance of trade between Canada and the U. S. has been very much in the U. S. favor for several years."

Conservation by Extension of Jurisdiction

"Behind the problems of imports, exports, tariffs and competition lies a more fundamental problem, that of insuring a continuing natural resource," declared Clarence A. Davis, U. S. Undersecretary of Interior.

He continued: "Canada and the United States together have developed a system of cooperation in the conservation of marine resources which has proved capable of dealing with a wide variety of problems. Five bilateral conventions stand as examples of this cooperation. And, of course, we are members along with other nations in three other International fishery conventions.

"In recent years, another method of conserving marine resources has been advanced by nations in several parts of the world—conservation based on unilateral rather than joint action. Special jurisdiction or sovereignty over broad expanses of the sea has been claimed on the grounds that such was necessary to insure conservation of marine resources. Attempts have been made to fence off

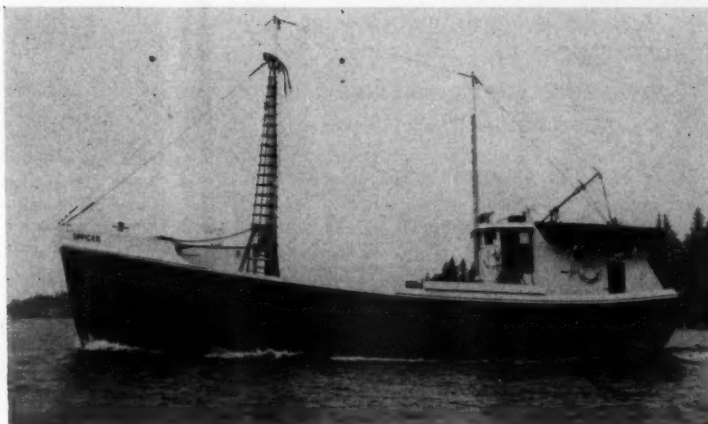
"Sippican" Proves Good Sea Boat

Owner Highly Pleased with Performance

76-Foot
SCALLOP DRAGGER

Built for
Love Fisheries, Inc.

Designed by
Dwight S. Simpson



At Gamage's you will find unexcelled facilities for building all types of wooden vessels up to 140 feet, under cover. There are two covered building ways, with overhead cranes for installing machinery. Your new boat can leave Gamage's completely equipped, ready to fish.

HARVEY F. GAMAGE, SHIPBUILDER

SOUTH BRISTOL, MAINE

"A Good Place to Build a Good Boat"

vast areas of the sea, these areas in some instances extending as much as two hundred miles from the coast. Fishing vessels of several nations have been seized on the high seas by patrol vessels of other nations.

"It has been the view of the United States that the drastic changes in the established order of things advocated by a number of nations—extensions of jurisdiction or sovereignty—are neither necessary nor would they be particularly effective in promoting the conservation of the resources of the sea. Our experience in this field leads us to take the position that the methods which Canada and the United States have used so effectively are suitable for general application, and, in the long run, will enable the world to come closer to the common objective than will unilateral action in the form of extensions of jurisdiction which would parcel out the sea.

"We know that if we are to do an effective job of conservation of a stock of fish, we must be in a position to regulate the exploitation of that stock no matter where it might be. We accomplish little if we regulate the exploitation of a stock in one area, but not in another.

"Most of the species of fish which support important fisheries throughout the world migrate widely. Herring, cod, halibut, salmon, tuna all move about over large areas of the sea. They move great distances along the coasts as well as in and out of coastal waters. The mere extension of territorial waters an arbitrary distance off the coast of a nation would accomplish little. If the conservation of these species is to be by extension of jurisdiction, that extension must then be far greater than the most extreme claims yet advanced.

"American and Canadian fishermen know from experience that conservation does not mean 'locking up' a resource. They know that on the contrary, conservation means using the resources in such a way as to insure the maximum harvest year after year. They know that under-exploitation—leaving fish to die in the sea—is as wasteful of the resource as over-exploitation. The objective of the fishery commissions which Canada and the United

States have jointly established is to make possible the maximum sustainable productivity of important marine resources."

"Radio-Pasteurization" of Fish

The use of radiation from atomic reactors on a commercial scale for improving the quality of fish through new preservation methods was envisaged by Dr. L. Voyvodic of Oakville, Ont. Dr. Voyvodic described experiments in food preservation, using varying amounts of radiation. A large amount produces sterilization and indefinite storage, while a small radiation extends the shelf life and keeps food fresh for 10 to 20 times as long, he reported.

An important feature of the tests was that no evidence was found that gamma irradiated foods contain either toxic agents or any induced radio-activity.

Very low doses of radiation are sufficient to stop spoilage in grain and flour and the sprouting of potatoes in storage. Somewhat higher doses can destroy most of the bacteria, producing "radio-pasteurization."

Because of large transportation distances in Canada not only from the sea coasts to the central markets but from markets to remote lumbering and mining operations, "radio-pasteurization" of fish is of extreme interest to the commercial fishing industry. Dr. Voyvodic said that as far as could be estimated to date, the cost of this treatment should be quite low, about a tenth of a cent per pound if carried out on a large scale at the processing plants and if large quantities of fission products were available from nuclear reactors.

Ritcey Elected President

Willoughby R. Ritcey of Riverport, N. S. was elected president of the Fisheries Council of Canada, succeeding J. Norman Hyland of Vancouver. Vice-presidents are O. J. McDonald, Vancouver; D. F. Corney, Prince Albert, Sask.; C. E. Desourdy, Montreal; J. B. Estey, Loggieville, N. B.; H. D. Pyke, Lunenburg, N. S.; A. Driscoll, St. John's, Nfld.; and Gray Steele, Toronto.

Northill Air-Lung

Manufacturers of the famous Northill Anchor now offer the fisherman's answer to fouled anchors, fouled nets and damage below the water line

Now you can say "good-by" to cumbersome diving equipment and still make vital underwater repairs hundreds of miles from port. Just check out a good swimmer in your crew on the use of the Northill Air-Lung. It's the best insurance you can have against the possibility of fouled anchors, fouled nets and damage below the waterline.

The Northill Air-Lung is scientifically engineered for maximum freedom, ease of breathing and safety under water. It requires practically no servicing. A swimmer can have it on and be over the side in minutes... can stay below about an hour for every air cylinder he carries... can make necessary repairs working with complete freedom. Every fishing boat should carry one as well as a Northill anchor.

Used and approved by the U. S. Navy



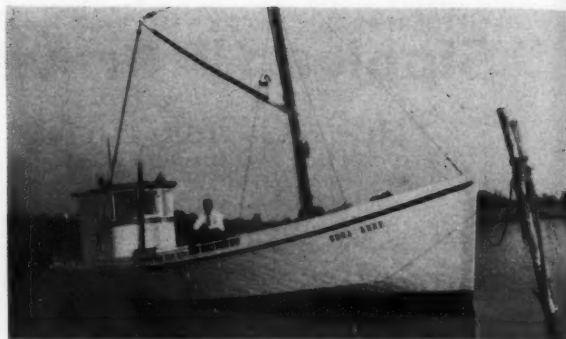
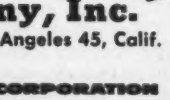
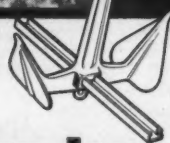
Northill Anchors and Air-Lungs
Sold only through authorized
dealers

Dealer inquiries invited

Northill Company, Inc.

9225 South Aviation Boulevard, Los Angeles 45, Calif.

A subsidiary of



The 48' "Edna Anne", owned by Capt. I. W. Diggs, Gwynn, Va. She is used for fishing and for freighting oysters from Milford Haven to Irvington, and has capacity of 450 bu. The vessel's power plant is a 75 hp. Lathrop gasoline engine, and she was built by Edgar Diggs & Son, Peary, Va.

Virginia to Have New Fisheries Research Boat

The keel for a new 55' fishery research vessel was laid last month at Dunn's Marine Railway, West Norfolk. Designed by Naval Architect George E. Meese of Annapolis, Md. in consultation with the staff of the Virginia Fisheries Laboratory, Gloucester Point, the new boat will be similar in her general lines to a Southern shrimp trawler.

Power for the vessel will be supplied by a Caterpillar D326 Diesel which develops 120 hp. at 1600 rpm.

Oystermen to Get Emergency Loans

The Small Business Administration has approved \$372,900 in emergency loans to 22 oysters planters in four Rappahannock River counties. The planters' oyster beds were damaged severely last Summer when hurricanes flushed the River with heavy amounts of fresh water.

The planters are to plant one-third of their oyster beds in each of the next three seasons. The counties eligible for these loans include Richmond, Lancaster, Middlesex and Essex.

Opening of Crab Packing Season

Tangier fishermen were looking forward to the opening of the crab packing season on May 8. Seven large packing houses in Tangier Lagoon were expected to hoist their white flags and open their doors for the buying of peeler crabs.

Peelers were reported as being plentiful in the creeks on the Eastern Shore of Virginia, with scrapers and hand netters making small catches and selling them to the crab houses on the shore. With the coming of warmer weather, it is expected the peelers will cross Tangier Sound and swarm into the local creeks and streams.

Seek to Develop Hardy Hybrid Clams

Experimental lots of young hybrid clams were unearthed recently at the Virginia Fisheries Laboratory for a physical checkup. These clams, held in trays nearly two years, are being compared with local clams for growth and survival.

It was found that the 150 southern clams placed in Virginia waters, although they grew fast as long as they lived, did not find the climate in Virginia conducive to their health. Only one-third of the southern clams survived the first Winter and only one remained alive at the end of the second Winter.

Since it seems practical to propagate large numbers of hybrid clams for seed purposes, it may be possible to develop a clam farming program in Virginia that will produce rapid growing clams which live well in the local climate.

In recent years the annual production of hard-shell clams in Virginia has been worth about half a million dollars. With the improvement of stock and the development of farming methods, it may be possible to increase production greatly. If hybrid clams reach market size in a year to two less time than the wild stock, clam farmers may reap three or more crops in the same time required to reap two crops of the native commercial clams.

Bagnell Appointed to Fisheries Board

Charles R. Bagnell of Eclipse was appointed by Gov. Stanley last month to succeed the late R. A. Edwards of Isle of Wight County as a member of the State Fisheries Commission. Bagnell is owner and operator of the Nansemond Fish & Oyster Co.

Hampton Roads Area Landings

The fish catch in the Hampton Roads area during the month of April amounted to 4,644,800 lbs., landed by trawlers and pound-netters, for an increase of about 300,000 lbs. over March, and a gain of 800,000 lbs. over April, 1955. Pound net landings were heavy this April, amounting to 968,500 lbs., or more than double those of the same month last year. Shad was the biggest item in the pound net catch, accounting for 375,300 lbs., which was approximately 75,000 lbs. more than the shad yield in April, 1955.

In landings by trawlers, scup, with 1,953,300 lbs., accounted for over 50 percent of the total catch. However, production of this variety showed a drop of nearly 700,000 lbs. from last April.

National Fisheries Convention

(Continued from page 16)

product sales rose 21 percent last year, and now account for 54% of the total shrimp volume.

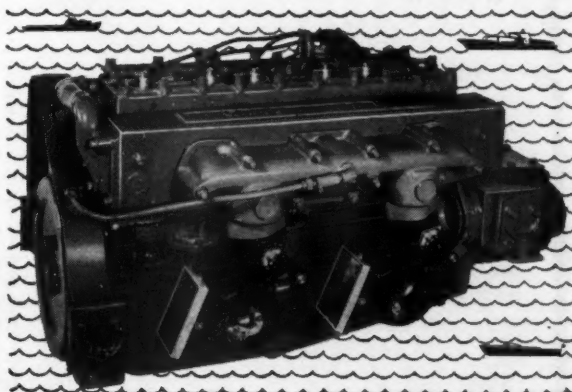
Smith Heads Industrial Products Division

Harvey W. Smith, J. Howard Smith Co., Port Monmouth, N. J., was named chairman of the Industrial Products Division of the National Fisheries Institute. Other members of the committee are: Jack T. Styron, Louisiana Menhaden Co., New Orleans, vice-chairman; Exteen Corbett, Nassau Fertilizer & Oil Co., Fernandina Beach, Fla., secretary; Thomas Barber, J. Howard Smith Co., Port Monmouth, N. J.; R. L. Haynie, Jr., Reedville Oil & Guano Co., Reedville, Va.; Stanley Letson, Maine Marine Products, Inc., Portland, Me.; William C. Lunsford, Jr., New Jersey Menhaden Products, Inc.; Herbert M. Porch, Eastern Marine Products, Inc., Portland, Me.; George R. Wallace, Wallace Fisheries Co., Morehead City, N. C.; A. W. Wilde, Alaska Reduction, Inc., Seattle, Wash.; James Nelson and H. R. Humphreys, Jr., Standard Products Co., Inc., White Stone, Va.; Earl P. McFee, Gorton-Pew Fisheries Co., Ltd., Gloucester, Mass.

Under the chairmanship of Mr. Humphreys, technical experts in the industrial products field—fish by-products for feeding animals and poultry—spoke to members of the Institute. "The Agricultural Situation as It Affects the Feed Industry" was discussed by W. E. Glennon, president of the American Feed Manufacturers Association. Prof. Thomas D. Runnels, University of Delaware, talked on "The Value of Fish Meal in Poultry Feeding as Established by Recent Research". Dr. Isidor Chamelin, associate director, Southern Bio-Research Laboratory, Florida Southern College, spoke on "Fish Oil Compounds for Fungicidal, Insecticidal and Nematicidal Uses in the Citrus Industry". "A New Development in Fish Meal Processing" was the subject of a talk by Dr. Thomas L. Meade, New Jersey Menhaden Products, Inc. Ralph C. Holder, technical consultant, Industrial Products Division, National Fisheries Institute, spoke on "The Nutritional Value of Fish Meal as a Feed Ingredient".

Howard O. Sturgis is director of the National Fisheries Institute's Industrial Products Division.

NEW! Chris-Craft 175-hp marine engine



Model MCL, 175 hp

... packs a wallop, yet weighs only 940 lbs.!

Think of it—an engine developing 175 hp at 3400 rpm, weighing only 940 lbs., and so compactly designed that it fits into the smallest space!

Thoroughly tested under marine conditions, the *Model MCL* gives your runabout, utility boat, or cruiser a new smoothness and ease of operation, with high torque at low rpm, unexcelled idling characteristics, rugged dependability in use.

Horsepower for horsepower, you can't beat a compact, power-packed Chris-Craft marine engine! Choose from 60, 95, 105, 120, 130, 131, 145, 158, and 200 hp models—and now, the all-new 175-hp Model MCL! Most are available with reduction drives, opposite rotation, and famous *Chris-O-Matic* (electric hydraulic clutch control). See your Chris-Craft dealer for further information. Or write us today!

SPECIFICATIONS

Cylinders.....6	Piston displacement.....339.2 cu. ins.
Bore.....4 ins.	Compression ratio.....7.22:1
Stroke.....4½ ins.	175 hp.....at 3400 rpm

FEATURES

Chris-Craft Model MCL 175-hp engine features: specially designed manifold for high efficiency; water-jacketed intake for smooth 500 rpm idling; 291.58 foot-pounds of torque at 1800 rpm; corrosion resistant throughout; three-pin, high-ratio reverse gear for dependability; full-rotating exhaust valves for longer valve life; pressure-fed bearings; high lift camshaft; latest type self-priming fuel pump (also fitted for hand priming); scientifically designed combustion chamber, high turbulence for complete use of the gas mixture; aluminum alloy pistons with full-floating pins and the most advanced piston ring combination; simple, compact, dependable three-bearing reduction gears in ratios of 1.50:1 and 2.03:1 available (also opposite rotation).

Chris-Craft

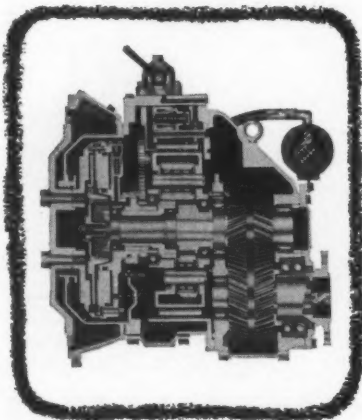
MARINE ENGINE DIVISION

CHRIS-CRAFT CORPORATION, ALGONAC, MICHIGAN

MOTOR BOATS • MARINE ENGINES • BOAT KITS
SEA SKIFFS • OUTBOARD CRUISERS

WORLD'S LARGEST BUILDERS OF MOTOR BOATS

for **ECONOMY**
in operation and
complete
DEPENDABILITY



S-N HYDRAULICALLY
ACTUATED
GEARS ARE PREFERRED

for these 5 reasons...

- 1 Designed for inexpensive "finger-tip" controls, S-N Gears give instant response with practically no operating effort. As a result the operator has greater time for maneuvering his boat.
- 2 By transmitting the engine power directly from the forward clutch to the reduction gear, the wearing of parts and power losses are reduced to a minimum.
- 3 The clutches are self-adjusting for normal wear, thus maximum clutch life is assured.
- 4 S-N Gears are designed for access to major parts, thus minimizing maintenance costs.
- 5 The heavy-duty herringbone type reduction gear is rigidly supported in its own housing. Various ratios can be supplied for reducing propeller speeds with no loss in horsepower. Both right and left hand propeller rotation are provided for your convenience.

Manual and Air-Operated
Gears are also available
for Marine Engines 4 to 1000 H.P.

SNOW-NABSTEDT

Transmission Engineers

FOR HALF A CENTURY

"MAKERS OF JOE'S GEARS"

THE SNOW-NABSTEDT GEAR CORP., HAMDEN, CONN.



Maryland Clamming Industry Has Big Potential

Experts are predicting that Maryland's relatively new clam-dredging industry may some day become a two-million-dollar-per-year business in terms of sales of the raw catch at the dock. The prediction was based on a survey which shows that present sales total about \$600,000 yearly, with less than 30 percent of the potential clamming area being worked.

Clam dredging on a large scale began in Maryland waters only five years ago when Fletcher Hanks of Oxford developed a dredging rig suitable for Chesapeake Bay operations.

Black Drumfish Arrive

Black drumfish have begun to arrive in Tangier Sound, off Crisfield, watermen report. They are said to be present in larger quantities than for the past few years.

Warm brisk southerly winds of the last week in April caused the fish to school up and move into the Sound. Pound fishermen on one day that week had a catch of more than 50 of the big finny tribe in their traps, averaging in weight from 20 to 50 pounds each.

Lower Bay fishermen are reporting increasingly good catches of other varieties of fish. Croakers, better known as "hardheads", have begun to arrive in larger numbers.

Oyster House Burns

The oyster industry in Crisfield suffered a blow about mid-season when the John T. Handy Co. oyster house on the waterfront was destroyed by fire. A shucking force of about 75 people were out of work, and only a few of them were absorbed in the other houses, which already had a capacity number employed.

Seed Oyster Experiments

Experiments which are designed to test several methods of holding cultch for oyster set above the bottom have been tried this past season in Chincoteague Bay. Results indicate that due to the high cost and scarcity of seed oysters, it may be economically feasible to grow seed oysters above the bottom where enemies cannot gain access to them. This should insure better survival and higher quality in the seed oysters, and so justify the cost of the operation.

The shells which were used were put on metal trays or held in wire bags and placed so that they would be in the intertidal zone. Tidal amplitude averages about one foot in that part of the Bay. The results of this experiment indicate that the method could be successful com-

mercially as far as receiving a set of oysters is concerned.

The shells held in the wire bags or trays retained a set of oyster spat which was about sixteen times as great as that on the shells which were planted on the bottom directly beneath the suspended shells.

Both sides of the suspended shells were available to receive the set of oysters. Another important point is that this method may be used to utilize good setting areas which may have a very soft, muddy bottom which would not support shells planted there.

The investigation will be carried on during the 1956 season. The costs will be noted so that an accurate estimate of the per bushel cost of seed raised in this manner may be obtained.

Fishermen Hampered by Cold

The 1956 commercial fishing season in sections of Chesapeake Bay, especially in and around the lower bay areas, was delayed last month somewhat by cold, blustery weather.

The first run of herring was about over the middle of April, and was fair. The next run is expected about the last of this month.

Shad have started to run, with fair catches reported. The market is low, however, and fishermen say they have been receiving as little as four cents a pound for buck shad and 15 cents for roe shad.

The first three weeks of the crab season, especially on the lower Eastern Shore, produced little due to the weather. A few hard crabs were brought to Crisfield processing plants from Virginia waters, mostly from Seaside and down the Chesapeake, where the waters are somewhat warmer.

During the middle of April none of the Crisfield plants were operating at capacity, and prices for hard crabs were around \$10 a barrel.

To Study Oyster Industry

At its first meeting since the 1956 General Assembly, the Legislative Council decided last month to study the regulation, conservation and administration of the State's oyster industry. The study will be made in conjunction with the Dept. of Tidewater Fisheries, the Dept. of Natural Resources and the Chesapeake Biological Laboratory at Solomons Island.

Maryland packers have been in a running battle with tongs and dredgers during the current oyster season over the short supply and rising prices of seafood. Packers have been asking a raise in the State tax assessed against foreign packers.

BOAT "CATHERINE T" REPOWERS WITH CAT* D375 MARINE ENGINE

Kevin Cleary, owner of the "Catherine T" fishing out of New Bedford, chose Caterpillar* when he repowered

WHEN asked why he chose Cat, Mr. Cleary replied, "I bought Cat because I felt she was the best engine. Now I know she is. Power . . . as soon as you give her the throttle, she takes off. She's just a wonderful engine."

Call Perkins-Milton Co. Inc. Today For Information on the Marine Engine to Fit Your Need

*Cat and Caterpillar are registered trademarks of Caterpillar Tractor Co.



PERKINS-MILTON CO. INC.

Marine Division: 4 Water St., Fairhaven, Mass. Phone: New Bedford 6-0011

Main Office: 376 Dorchester Ave., Boston, Mass. Phone: ANdrew 8-4660

Fuel Consumption of Gulf Shrimp Trawlers Compared

Fuel consumption is one of the leading cost factors in vessel operation. Moreover, as compared with such fixed expenses as insurance, depreciation, licenses and interest charges, it is one of the few costs over which vessel operators have some degree of control.

The accompanying table gives the results of a fuel consumption study made for the Fish & Wildlife Service. It shows that the fuel consumption for five shrimping vessels which were based at Key West and fished the Tortugas grounds in 1954, ranged from 57 gallons of Diesel fuel per day to 76 gallons. However, the same figures expressed in terms of the vessel's shrimp catch ranged only from .32 to .37 gallons per pound of shrimp caught.

The figures for Brownsville, Texas, expressed in terms of shrimp catch, ranged from .30 gallons per pound of shrimp caught to .48 gallons. The fuel consumption for Biloxi, Miss. boats, expressed in terms of the shrimp catch, ranged from .22 gallons per pound of shrimp caught to .29 gallons.

A rule-of-thumb method of fuel efficiency appraisal for a vessel operator is derived from dividing his annual catch by his annual fuel purchases. The table shows the results for vessels shrimping in the areas mentioned by various dimensions, engine power and by size of net. By selecting a vessel with about the same characteristics, an operator can estimate approximately his vessel's fuel consumption rate in relation to others in the shrimping industry. Such a comparison must, of course, take into consideration equal distances to fishing grounds.

The fuel consumption study was made in connection with shrimp trawler efficiency studies carried out by Harwell, Knowles and Associates, Coral Gables, Fla., under the supervision of the Fish and Wildlife Service.

The firm is investigating important features of shrimp vessel design and construction, vessel productivity and efficiency of navigational and fishing aids.

FUEL CONSUMPTION ON SHRIMP TRAWLERS, PER DAY AND PER POUND OF SHRIMP CAUGHT

Length, Beam, Draft	Engine	Size of Net	Gallons of Fuel		Per Lb. Shrimp Caught
			Year Total	Per Day	
Key West, Fla. (Tortugas Grounds)					
45'x16'x6'	165 hp.	62'	16,700	76	.37
41'x14'x6'	110 hp.	62'	12,400	57	.35
46'x16'x5'	100 hp.	62'	14,800	65	.35
42'x15'x6'	165 hp.†	62'	12,300	62	.33
53'x16'x8'	165 hp.	65'	15,900	69	.32
Key West, Fla. (Campeche Banks)					
62'x18'x8'	165 hp.	65'	9,400	135	.34*
59'x18'x8'	120 hp.	65'	8,600	109	.28*
Biloxi, Miss. (Delta Area)					
42'x14'x4'	110 hp.	55'	12,500	52	.29
57'x18'x6'	120 hp.	64'	16,000	61	.28
48'x16'x4'	77 hp.	52'	10,800	42	.23
43'x14'x4'	83 hp.	56'	8,600	42	.22
Brownsville, Tex. (Banks off Brownsville)					
60'x18'x7'	120 hp.	86'	25,700	138	.48
54'x19'x8'	120 hp.	86'	27,500	131	.43
59'x18'x8'	120 hp.	86'	27,800	116	.33
59'x18'x8'	120 hp.	86'	24,200	114	.30
65'x20'x7'	170 hp.	86'	31,200	125	.30
67'x19'x9'†	330 hp.	110'	17,000	205	.41*

* September through December only.

† Gas; all others are Diesel powered.

‡ Steel construction; all others are wood.

EQUIPMENT and SUPPLY NEWS

New Ritchie Compass Has Shock Mounting

A new model 5-inch compass, called the Globe Master, Model C-453, is being manufactured by E. S. Ritchie & Sons, Inc., Pembroke, Mass. A feature of the new compass is its shock mounting.

By use of three special mounts, shocks or vibrations are prevented from reaching the compass unit. This not only results in longer life of the pivot and jewel, but allows the card to remain undisturbed. With these mounts, the compass unit will not oscillate when subjected to vibrations.

The binnacle is formed from heavy gauge brass and is available in gray or black wrinkle baked enamel or polished brass. The lighting consists of two miniature bayonet base lamps, installed inside the binnacle.

Since the lubbers lines are hydraulically stabilized and internally gimballed, they remain at right angles to the card regardless of the position of the binnacle. The compass bowl is constructed of brass and has a $\frac{1}{4}$ " thick glass dome, and there is a bellows type expansion chamber.

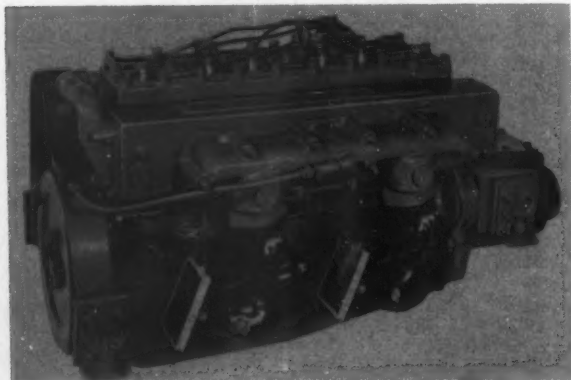
The new Globe Master compass also is available with quadrantal spheres to meet special compensating problems caused by steel hulls or superstructure.

New Fageol Engine Catalog

A new miniature catalog descriptive of its line of Fageol "44" inboard marine engines has been issued by Fageol Products Co., Kent, Ohio. The folder describes and illustrates the standard Fageol 30 hp. engine, the 35 hp. dual carburetion model and the 45 hp. Fageol Pepco supercharged unit. Twin engine installations also are listed.

New Lightweight Chris-Craft Engine

A new 175 hp. marine engine introduced by Chris-Craft, Algonac, Mich., weighs only 940 lbs. and develops top horsepower at a comparatively low 3400 rpm. The low weight and high power ratio makes the new Model "MCL" ideal for a wide range of boats. According to Engine Division Sales Manager Roy Clark, the high torque at low



New lightweight 175 hp. Chris-Craft marine engine.



New 5" Ritchie Globe Master compass in special deck mount binnacle.

rpm. offers increased efficiency, inasmuch as larger wheels can be swung and engines run at lower operating temperatures.

The new 6-cylinder engine has a 4" bore and $4\frac{1}{2}$ " stroke. Piston displacement measures 339.2 cu. in., and the compression ratio is 7.22:1. Reductions of 1.5:1 and 2:1 are offered, as well as opposite rotation, and the new engine can be equipped with electric-hydraulic ("Chris-O-Matic") clutch controls.

International Has New Bilge Cleaner

The International Paint Co., Inc., 21 West St., New York 6, N. Y., recently has developed Interlux Bilge Cleaner No. 11, which is claimed to be harmless to paint, caulking, pumps or fittings. The new cleaning product gets into unreachable spots and eliminates scrubbing and scraping.

The bilges should be filled with enough water, either salt or fresh, to do a complete washing job. One and one-half, or two fluid ounces of Interlux bilge cleaner should be applied to each gallon of water and be allowed to remain in the bilge for 24 hours. The sludge may then be pumped out, leaving the bilge clean and pleasant smelling and free from the hazards of fire or explosion.

Other new products introduced by International Paint Co. include Interlux Antifouling Bottom Paint White No. 28 and Interlux Waterline Striping White No. 27. Both paints are designed for application directly to the wood. The Striping White No. 27 is specifically formulated for use on the "wind and water belt."

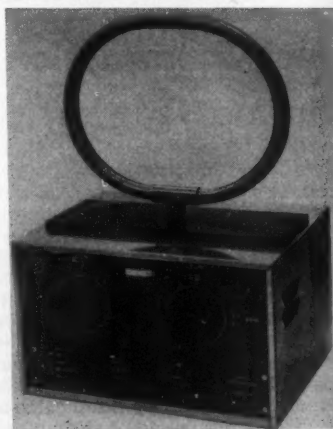
Kaar Introduces New Direction Finder

The new supersensitive Kaar 238 direction finder, which is manufactured by Kaar Engineering Corp., 2907 Middlefield Rd., Palo Alto, Calif., is claimed to eliminate human error in taking radio bearings. Features of this new direction finder include front loop panel control, with vertical compass rose, which assures smooth, easy operation necessary for accuracy. It allows eyelevel mounting; helps the operator take bearings more rapidly; and permits orienting the direction finder in any position on the boat.

Another feature to insure directional stability and sensitivity is the plug-in loop with balanced electrostatic shielding. This shielding eliminates the electrostatic effect of the loop, thus assuring the operator the narrowest minimum possible in obtaining accurate bearings.

The small ($12\frac{3}{4}$ " x $11\frac{1}{4}$ " x $18\frac{3}{4}$ "—including loop) Kaar 238 direction finder employs two IF stages and one tuned RF stage. Also incorporated into this new direction finder is an automatic noise limiter which allows the highest quality reception possible, a specially shielded power supply to eliminate vibrator hash from the direction finder as well as associated equipment; and a tuning meter, designed to take all the guesswork out of bearings.

The new direction finder meets all FCC requirements and, at slight extra cost, is available with an outside loop antenna.



New Kaar direction finder.



PFLUEGER HOOKS

MADE BETTER TO LAST LONGER



SHARP POINTS



STRONG STEEL

Even though Pflueger makes millions of fish hooks each year, one fact is never forgotten—that fishermen the world over rely on Pflueger quality.

THE ENTERPRISE MANUFACTURING CO., AKRON 9, OHIO



PFLUEGER A Great Name In Tackle
(Pronounced "FLEW-GER")

Patent Pending on "Western Jib" Trawl

Western Net Shop of Freeport, Texas, now has a patent pending on their "Western Jib" trawl. The patent applies to the "jib" or corner design, which most fishermen agree is far superior to the old style flat net corner which has tapers on the body and wing sides. The advantages of the "Western Jib" are: no deforming of the webbing in the jibs, less rehangng, and greater strength for the trawl.

"Speck" Harris and "Whistle" Rhodes, owners of the Western Net Shop, will lease manufacturing rights to one net shop in each port. Interested parties should contact the designers. A flat yearly rate will be charged for the manufacturing rights, and contracts will be arranged and drawn up by the designer's patent attorney, A. Yates Dowell of Washington, D. C.

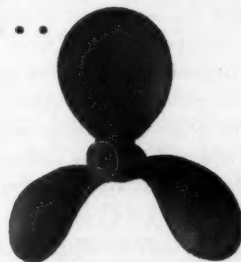
The Western Net Shop was remodeled recently, with more floor space added in anticipation of a big shrimp season on the Texas coast this year. Equipment for coal tarring the finished trawls will be installed soon, and this is expected to speed production of new nets and give more time for repair of damaged trawls.

Bludworth Marine now Division of Kearfott

Bludworth Marine, which for 30 years has been engaged in the manufacture, sales and service of electronic instruments, has become a division of Kearfott Co., Inc., a subsidiary of General Precision Equipment Corp. Kearfott is well known in the aviation and marine industries, manufacturing gyros, control components, navigation systems, radar components and test equipment.

Willard C. Blaisdell, long associated with Bludworth Marine, will serve as general manager of the new Division. It is expected that the new relationship, which combines the Bludworth Marine service organization and knowledge of its specialized field with Kearfott's large engineering and production facilities, will better serve the need for new designs, components and marine instruments.

EXPERT RECONDITIONING ON PROPELLERS OF ALL SIZES . . .



PRECISION EQUIPMENT and expert workmen insure an accurate repair job. We guarantee our work. Estimates gladly furnished. Send your damaged propeller to us for free inspection and report.

HYDE WINDLASS COMPANY

BATH, MAINE

HYDE
PROPELLERS

MAKES YOUR NETS LAST LONGER



INTERNATIONAL NET DIPS protect nets most effectively. They come ready-to-use, require no heating nor special equipment for application, and are quick drying.

INTERTOX NET DIP #1699 is an inexpensive homogeneous mixture with toxic properties which penetrate completely into the innermost fibres of cotton and linen netting, protecting them from the destructive action of the organisms that cause cordage rot.

G. M. FISHING NET COPPER PAINT #1866 is higher in cost due to the anti-fouling element. Will not injure netting nor cause undue stiffness. Assures protection from fouling much longer than ordinary materials.

The cost of nets is such an appreciable part of the cost of fishing, that materially prolonging the life of nets is of utmost importance to the fisherman. Write today for particulars about these net dips.



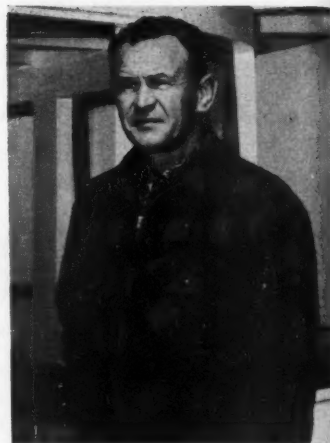
International NET DIPS

International Paint Company, Inc.

21 West Street, New York 6, N. Y.
So. Linden Avenue, So. San Francisco, Calif.
628 Pleasant St., New Orleans 15, La.

WORLD'S LARGEST MARINE PAINT MAKERS

J. E. Naf, who has been appointed sales manager of Morehead City (N.C.) Shipbuilding Corp. For the past year, "Johnny" Naf has been the Southern sales representative of the shipyard. His promotion, stated R. C. Kirchofer, president of the shipyard, "comes to him as a result of performance in selling Hatteras Trawlers." Though a fairly recently transplanted Californian, "Johnny" Naf has become very well known up and down the Atlantic Coast.



Two New V-Type Caterpillar Diesels

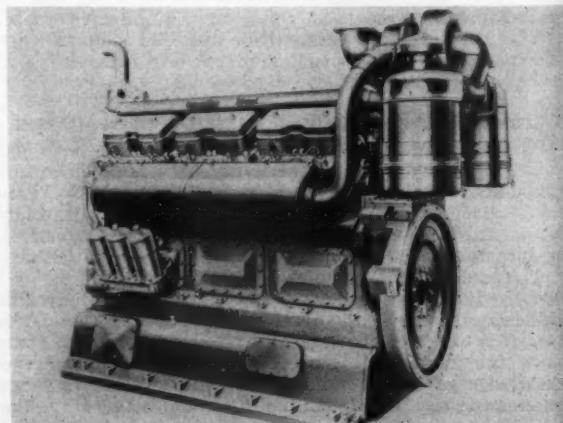
Two new heavy-duty V-type Diesels add increased versatility to Caterpillar Tractor Company's line of marine engines. Available in turbocharged, Roots-blown, and naturally-aspirated versions, the new eight and twelve cylinder D375 and D397 are of four-cycle design.

At 1225 rpm., the turbocharged D397 delivers 500 hp. continuously, while the Roots-blown model develops 450 hp. Continuous ratings for the D375, at 1225 rpm., range from 300 for the turbocharged and Roots-blown engines to 235 hp. for the naturally-aspirated model.

Principal differences between the new engines and their predecessors, the D364, D375, D386 and D397, are in the cylinder heads, exhaust manifolds, and method of supercharging. Inherent advantages of the former models, such as the completely water-jacketed, port-free cylinder liners and the low injection pressure, precombustion chamber type fuel injection system have been retained.

The new turbochargers now available for these engines enable them to produce increased power with less fuel by using the energy of exhaust gases which would otherwise be wasted. Improved engine breathing ability, the result of a new cylinder head design, makes it possible for the new units to take full advantage of the extra air made available by supercharging. The new cylinder heads provide a more direct path from the combustion chamber to the exhaust manifold.

New exhaust manifolds are offered in "dry," "shielded" and "wet" versions to enable users to adapt the engines to their specific needs. The new shielded manifolds utilize heavy layers of fiber glass, encased in steel, to keep heat out of the engine room without adding to the cooling load of the engine.



Left rear view of new 500 hp. turbocharged Caterpillar D397 Diesel.

Louisiana Inside Waters Opened to Shrimping

Taking of shrimp in Louisiana's inside waters became legal at daylight on April 16. These waters have been closed since February 15.

Trawling for shrimp will be legal in all Louisiana waters not covered by special regulation or law. The size limit on salt-water shrimp is not more than 68 to the pound.

This restriction does not apply, however, to shrimp taken or had in possession for bait. No trawling is permitted at night.

Production of Canned Shrimp Light

During the month of April the production of canned shrimp was extremely light. Weather conditions during the month were far from ideal.

Stocks of shrimp in canners' hands are for practical considerations non-existent. Supplies in the hands of the trade are low, if not exhausted, and demand is strong.

It is estimated that production during this month will begin slowly, with the smaller sizes of shrimp predominating. Large and Jumbo shrimp probably will remain in short supply.

SeaPak Opens Shrimp Breeding Plant

SeaPak Corp., one of the largest shrimp breeding firms in the country, has opened a branch plant in Morgan City. The firm has plants at Valona, Ga., St. Simons, Ga., Tampa, Fla., and in Newfoundland.

SeaPak has located in two prefabricated buildings on Morgan City Freezer and Cold Storage property. One building is designed for the shrimp peeling process and the other for breeding.

John E. Duggan from Plant City, Fla. will manage the local branch plant. The operation will employ between 100 and 150 workers, with the majority being women.

New Harbor Oil Tanker "Paam"

(Continued from page 19)

allowing major engine repairs or complete removal of the engine, while leaving the vessel free for service.

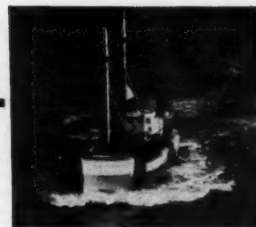
The storage tanks are subdivided into seven oiltight compartments to segregate different grades of fuel and to enable the operator to control trim and list of the ship. The main cargo pump, which is mounted on the main deck, is driven through a chain and sprocket from a power take-off clutch on the front end of the 145 hp. propulsion Diesel. Suction may be taken from any tank, and delivery is made through a recording meter by one of two nozzles with attached hose, coiled on two large reels mounted on deck.

The vessel is equipped with a C-O-Two fixed carbon dioxide smothering system, which is capable of completely flooding any two cargo tanks, sealing off the oxygen and thereby extinguishing any fire below deck. Other equipment includes Michigan propeller, Burgess-Manning silencer, Wilfrid White compass and New Bedford cordage.

Since the tanker will be in service all year around, the engine cooling system is entirely enclosed and treated with anti-freeze solution so that there will be no chance of freeze-up in cold weather.

The problem of electrolysis, which sometimes causes steel hulls to become eroded or badly pitted, has been overcome by the builders with the use of a Monel metal propeller shaft, cast steel propeller and Micarta fiber type stern and rudder bearings, thus eliminating all brass fittings underwater. Other features incorporated to assure long life of the steel hull include the use of wrought iron for the stern tube, rudder port and sea chest, and galvanized salt water piping.

HIGH SEAS- DRY YOU!



Shipping green water? Let it come! U. S. Rubber Raynsters are designed to keep you watertight. And they're specially compounded to fight off abrasions, sun and cold.



U. S. Peerless Neoprene Suit
• Neoprene coated outside, inside
• sheds acids, oils • smooth corduroy-tip collar • full-length jacket
• bib-front overalls, adjustable
• cut-off band, shortens without raveling • in black, yellow, olive drab



U. S. Ruff-N-Tuff Eureka Suit
• strong, heavy-coated fabric • vulcanized waterproof seams • inside fly front • corduroy-tip collar • bib-front overalls • elastic suspenders • cut-off band, shortens without raveling • in black, yellow



Storm King Boots • tempered rubber • reinforced toe • deep-cleated outsole



Black Body Boots • "Shockproof" insole • cleated outsole • webbing shoulder straps

**U. S. INDUSTRIAL RAYNSTERS®
U. S. ROYAL RUBBER FOOTWEAR**

Sold only through industrial and retail stores



United States Rubber

There's longer service in a . . .

MAXIM SILENCER

For thirty years Maxim has made the best grade marine silencers for gasoline or Diesel engines, large and small. Wet type or dry type (with or without spark arrestors), you can't beat them for good silencing and lowest operating cost. Ask for our latest bulletins.



And better holding
with a CQR anchor

Light and easy to handle
but a bulldog for holding
—non-fouling—comes up
clean. From 4 to 5500 lbs.
Write for details.

DEPT. TW.

THE MAXIM SILENCER COMPANY
126 Homestead Avenue • Hartford, Connecticut

STEEL FISHING BOATS



32 FT. SEINE BOAT BUILT FOR
TALLMAN & MACK FISH TRAP CO.
NEWPORT, RHODE ISLAND

Commercial Vessels to Meet Every Requirement

Gladding - Hearn

SHIPBUILDING CORPORATION
DESIGNERS - BUILDERS

Somerset, Mass.

Tel. Fall River 4-6458

BOAT CATCHES

For Month of April

Hailing fares. Figure after name indicates number of trips.

BOSTON

Acme (3)	29,200	Michigan (3)	568,100
Agatha (2)	117,700	Morning Star (1)	35,800
Agatha & Patricia (4)	155,500	Mother Frances (1)	57,900
Alphonso (1)	2,500		
Angie & Florence (2)	43,900	Nancy B. (2)	59,500
Annie & Lucy (2)	18,100	New Star (3)	410,200
Arlington (2)	386,500	Notre Dame (4)	136,200
Atlantic (3)	423,900		
Baby Rose (3)	288,800	Ocean Clipper (3)	136,800
Bay (2)	405,800	Ocean Wave (1)	18,400
Bonnie (2)	628,700	Ohio (2)	270,000
Bonnie Billow (2)	349,500	Olympia (3)	94,300
Bonnie Breaker (2)	344,000	Olympia LaRosa (3)	155,100
Bonnie Breeze (3)	417,300		
Brighton (2)	314,700	Pam Ann (3)	334,000
Buzz & Billy (3)	119,600	Patty Jean (3)	629,800
		Phantom (3)	603,000
Cambridge (2)	515,000	Pilgrim (3)	240,800
Carmela Maria (5)	56,400	Plymouth (2)	366,200
Catherine B. (3)	80,200	Puritan (1)	9,100
Columbia (1)	8,300		
Comet (3)	559,000	Racer (2)	391,200
Elizabeth B. (3)	252,500	Raymonde (3)	281,900
Emily H. Brown (2)	286,200	Red Jacket (3)	769,500
		Rosa B. (2)	401,500
Flying Cloud (3)	730,000	Rosie (4)	59,200
Four (2)	247,200	Rush (2)	401,200
4-H-823 (2)	6,900		
		St. Victoria (2)	119,400
Geraldine & Phyllis (1)	35,300	Sant' Antonio II (4)	37,800
		Santa Maria (3)	74,500
Ida & Joseph (1)	23,500	Santa Rita II (1)	11,400
		Seraphina II (1)	39,600
Jane B. (2)	242,700	Star of the Sea (1)	34,200
J. B. Junior (1)	160,800	Sunlight (3)	166,800
J. B. Junior II (1)	1,500	Swallow (2)	371,000
Josephine F. (3)	22,100		
		Texas (3)	453,700
Leonard & Nancy (2)	89,900	Thomas D. (4)	209,400
Liberty Belle (3)	41,800	Thomas Whalen (3)	448,400
Luckimee (1)	215,000		
		Victoria II (1)	11,300
Magellan (3)	84,000	Villanova (4)	97,700
Maine (2)	447,900	Vincie N. (1)	46,000
Manuel F. Roderick (1)	94,100		
Mary & Joan (2)	221,400	Weymouth (2)	275,600
Mary Ann (1)	22,200	Wild Duck (2)	278,000
Mary Rose (1)	45,600	William J. O'Brien (3)	560,900
M. C. Ballard (2)	238,700	Winchester (3)	712,600
		Wisconsin (3)	567,000

NEW YORK

Barbara & Gail (2)	50,000	Golden Eagle (3)	147,000
Carol-Jack (2)	110,500	Hazel B. (3)	114,200
Catharine C. (3)	94,800	Joseph S. Mattos (2)	89,500
Charlotte M. (3)	130,700	Lady of Good Voyage (4)	200,000
Clipper (4)	212,800	Miriam A. (2)	44,000
Edith L. Boudreau (3)	148,200	Teresa & Jean (2)	72,700
Felicia (2)	48,800	Tina B. (3)	196,500

Scallop Landings (Lbs.)

Beatrice & Ida (2)	16,800	Maridor (1)	11,000
Erant (1)	9,400	Muskegon (2)	10,300
Clipper (2)	14,200	Norseman (1)	5,800
Enterprise (1)	3,600	Richard Lance (1)	8,000
Florence B. (2)	13,600	Rosalie F. (2)	11,300
Louis A. Thebaud (1)	3,200	S. No. 31 (1)	6,900

ROCKLAND, ME.

Araho (2)	167,000	Helen Mae II (3)	23,800
Calm (2)	475,000	John J. Nagle (2)	275,000
Crest (2)	385,000	Little Growler (4)	81,000
Dorothy & Betty II (3)	72,000	Mabel Susan (5)	105,300
Drift (1)	275,000	Squall (2)	520,000
Elin B. (3)	62,000	Surf (2)	475,000
Ethel B. (1)	2,900	Wave (2)	530,000
Flo (3)	62,000		

Scallop Landings (Lbs.)

Jeanne D'Arc (2)	21,000	Rhode Island (2)	19,000
------------------	--------	------------------	--------

WOODS HOLE, MASS.

Arnold (5)	34,300	Madeline (4)	15,800
Bernice (4)	17,000	Medric (1)	2,900
Cap'n Bill II (2)	13,700	Molly & Jane (1)	9,000
Charles E. Beckman (1)	6,800	Morning Star (5)	8,100
David & James (1)	800	Priscilla V. (3)	18,200
Driftwood (1)	1,200	Reliance (3)	7,300
Ebenezer (1)	3,300	Southern Cross (2)	7,200
Gertrude D. (1)	22,000	Three Bells (2)	5,600
Gertrude E. (1)	13,700	Viking (4)	7,400
Intrepid (2)	4,200	Winifred M. (5)	11,900
J. Henry Smith (6)	11,100		

NEW BEDFORD

Adventurer (4)	62,500	Jimmy Boy (2)	39,600
Anastasia E. (1)	2,500	Joan & Tom (1)	20,100
Annie Louise (4)	26,300	Julia DaCruz (2)	44,400
Annie M. Jackson (3)	42,500	Katie D. (3)	84,500
Barbara M. (2)	19,600	Kelbarsam (1)	7,000
Carl Henry (3)	102,700	Madonna di Trapani (1)	5,400
Catherine T. (2)	80,500	Major J. Casey (3)	44,000
Charles E. Beckman (3)	33,800	Marie & Katherine (2)	34,600
Charlotte G. (1)	16,100	Mary Tapper (2)	56,000
Christina J. (2)	79,500	Midway (3)	150,600
Christine & Dan (4)	52,000	Molly & Jane (2)	35,500
Comber (1)	6,700	Nautilus (3)	195,000
Dauntless (4)	62,500	Pauline H. (3)	246,900
David & James (2)	6,500	Phillip & Grace (1)	28,000
Driftwood (2)	7,000	Phyllis J. (3)	27,700
Ebenezer (4)	15,200	Roann (2)	39,500
Elva & Estelle (3)	29,200	Roberta Ann (1)	23,000
Eugene & Rose (2)	25,800	Rosemarie V. (1)	11,500
Evelina M. Goulart (2)	64,200	Rush (1)	19,000
Falcon (1)	2,300	R. W. Griffin, Jr. (3)	75,000
Figueira Da Foz (1)	29,000	St. Ann (1)	9,000
Gannet (2)	103,600	Sea Fox (2)	26,800
Geraldine & Phyllis (1)	13,400	Shannon (2)	36,200
Gertrude D. (1)	27,000	Solveig J. (3)	189,200
Gladys & Mary (4)	113,600	Sonya (1)	9,000
Growler (2)	87,100	Stanley B. Butler (3)	260,000
Hope II (1)	18,000	Sunbeam (2)	25,800
Invader (3)	99,000	Susie O. Carver (3)	29,600
Ivanhoe (2)	33,000	Two Brothers (2)	13,500
Jacintha (2)	110,200	Venture I (3)	103,600
Janet & Jean (2)	16,300	Victor Johnson (2)	33,700
Jeanne Ann (1)	12,500	Viking (3)	70,000
		Whaler (3)	117,000

Scallop Landings (Lbs.)

Agda (2)	11,700	Linus S. Eldridge (2)	18,500
Aloha (3)	30,600	Louis A. Thebaud (1)	9,000
Alpar (1)	10,300	Louise (2)	22,000
Amelia (2)	17,500	Lubenray (2)	16,000
Antonina (2)	10,200	Malene & Marie (2)	20,200
Babe Sears (1)	9,000	Marjorie M. (2)	6,500
B. & E. (2)	20,000	Martha E. Murley (2)	10,800
Barbara (2)	10,200	Mary Ann (2)	21,000
B. Estelle Burke (3)	29,000	Mary J. Hayes (2)	22,000
Bobby & Harvey (2)	17,500	Mary J. Landry (1)	2,000
Bright Star (2)	21,500	Michael F. Densmore (1)	11,000
Camden (1)	11,000	Monte Carlo (2)	21,000
Capt. Bill (3)	13,400	Moonlight (2)	22,000
Carol & Estelle (1)	8,500	Nancy Jane (2)	19,000
Catherine & Mary (1)	9,000	Nellie Pet (3)	24,000
Charles S. Ashley (2)	20,500	New Bedford (2)	22,000
Dartmouth (2)	20,000	Newfoundland (2)	22,000
Debbie Jo-Ann (2)	21,300	Noreen (3)	23,000
Dorothy & Mary (1)	8,000	Palestine (2)	10,500
Edgartown (2)	22,000	Pearl Harbor (1)	11,000
Eleanor & Elsie (2)	14,800	Pelican (2)	22,000
Elizabeth N. (3)	30,600	Porpoise (2)	16,500
Eugene H. (2)	21,000	Rush (1)	10,700
Eunice-Lillian (2)	17,500	Ruth Moses (2)	20,000
Fairhaven (3)	30,500	Santa Cruz (1)	4,800
Falcon (2)	6,900	Sea Hawk (2)	11,800
Fleetwing (2)	20,000	Sea Ranger (2)	21,200
Friendship (2)	22,000	Sippican (2)	22,000
Jerry & Jimmy (2)	15,400	Smilyn (2)	18,200
John G. Murley (2)	21,800	Stella Maris (1)	5,200
Josephine & Mary (2)	12,000	Ursula M. Norton (2)	22,000
Kingfisher (2)	18,000	Vivian Fay (1)	8,000
Laura A. (2)	22,000	Wamsutta (3)	24,000
Lauren Fay (2)	22,000	William D. Eldridge (1)	11,000

PORTLAND, ME.

Agnes & Elizabeth (4)	113,000	Marie H. (3)	27,500
Alton A. (2)	28,000	Mary & Helen (3)	35,000
Andarte (3)	143,000	Mascot (2)	6,500
Ariel (4)	21,400	Medan (2)	575,000
Blanch R. III (5)	6,000	Minnie (1)	175,000
Challenge (6)	15,700	Ocean Clipper (2)	37,000
Challenger (8)	23,200	Quincy (1)	144,000
Courier (2)	119,000	St. George (1)	148,000
Crescent (12)	39,100	St. Joseph (1)	7,500
Dorchester (1)	91,000	St. Joseph II (5)	21,800
Dorothy & Ethel II (4)	76,000	Silver Bay (1)	118,000
Ellnor & Jean (4)	107,000	Theresa R. (2)	126,000
Ethelina (3)	112,000	Vagabond (1)	20,000
Gulf Stream (3)	179,000	Vandal (4)	179,000
Kennebec (1)	83,000	Vida E. II (4)	38,500
Laurence Scola (2)	6,500	Wawenock (1)	205,000
Little Growler (1)	33,000	Winthrop (2)	129,000

Scallop Landings (Lbs.)

Adele K. (1)	10,500
--------------	--------

Steer Your Course to Greater Profits



NEW LORAN



Saves You Time



Whether you are spotting time-tested fishing banks or determining the fastest course for your ship, Radiomarine Loran (Model LR-8803) cuts your running time to the barest minimum. Fast, accurate fixes speed your ship by determining your location . . . maintaining your course. And it operates in all weather . . . foul or fair.

Saves You Money



With Radiomarine Loran you can take advantage of favorable ocean currents that conserve your fuel. Quick positioning in any weather means cutting trip time . . . eliminating costly delays. And for fishing men, Radiomarine Loran helps you find the most profitable fishing banks quicker, indicates when you arrive, and helps keep you directly on your fishing position at all times.

Saves You Effort



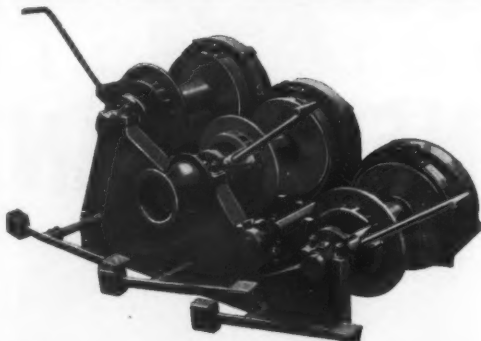
Direct reading . . . calculates automatically. Simplifies pin-pointing your position on Loran charts. Recessed scope and dial make day or night reading quick and easy. Whether you are on a fishing boat, tanker, cargo ship or luxury liner, steer your course to greater profits with Radiomarine Loran.



write for free information now!

RADIOMARINE CORPORATION of AMERICA
A SERVICE OF RADIO CORPORATION OF AMERICA
75 VARICK STREET, NEW YORK 13, N.Y.

The Fishermen's Choice is the STROUDSBURG HOIST



**Ruggedly built to Stand Up
under hard, constant service.**

Made of the most durable materials, Stroudsburg Hoists are designed to provide maximum length of service at minimum cost. The friction drums have ratchet, pawl and brakes with interwoven type linings, and are engaged by internal thrust cams with friction plates. Pinion shaft extension available for mounting engine drive in clockwise or counter clockwise rotation. Made in single, double and triple drum models.

STROUDSBURG ENGINE WORKS
Box 207, Stroudsburg, Penna.

PROTECTION UNLIMITED!
Plus comfort, warmth and wear!



**Specify
TOWER
Neoprene Clothing**

In the foulest weather, on hot days or cold, fishermen can be sure of complete protection if they're wearing famous TOWER Neoprene Suits and Sou'westers, or hooded shirts with roomy pants. These comfortable durable, extra-protective garments . . . made of strong, impregnated fabric coated inside and out with Neoprene Latex . . . are highly resistant to abrasions, acids, alkalis, salt water or any hazards that can threaten the important work of today's commercial fisherman.

For those who do not need the extra protective qualities of Neoprene, there is a complete line of "ARROW BRAND" rubber latex clothing.

TOWER'S Clothing, the fisherman's favorite since 1836, is available at all leading dealers.

**For complete information, write
Department NF**

**TOWER'S
FISH BRAND**

**ARROW BRAND
RUBBER**

**TOWER'S
ARROW BRAND**

A. J. TOWER CO.
A Division of Sawyer-Tower, Inc.
Boston 20, Mass.

GLOUCESTER, MASS.

Alden (7)	109,500	Madonna Di Siracusa (5)	6,000
American Eagle (5)	109,000	Margaret Marie (8)	76,000
Anna Guarino (8)	15,500	Margie L. (10)	16,500
Annie (7)	16,500	Maria Stella (1)	160,000
Annie & Josie (8)	30,000	Mary (12)	26,500
Anthony & Josephine (9)	48,000	Mary Ann (6)	284,000
Bonaventure (4)	602,000	Mary E. (7)	16,000
Buzz & Billy (1)	5,000	Mary Rose (1)	160,000
Cape Cod (7)	29,000	Minkette I (4)	3,000
Carlansul (5)	27,000	Morning Star (3)	89,500
Carlo & Vince (5)	57,000	Mother Ann (2)	490,000
Catherine B. (5)	437,500	Nancy & Maria (5)	13,500
Cigar Joe (6)	167,500	Natale III (6)	145,000
Columbia (2)	183,000	Njorth (4)	6,000
Curlew (2)	340,000	No More (9)	13,900
Cushmere (1)	220,000	Notre Dame (2)	92,000
Dawn (11)	22,500	Ocean Life (1)	440,000
Dolphin (5)	489,000	Peggy Belle (5)	4,800
Doris F. Amero (3)	214,000	Pioneer (10)	18,000
Eagle (3)	472,000	Ponce De Leon (3)	2,000
Eddie & Lulu M. (7)	22,000	Priscilla (8)	8,500
Eva M. Martin (5)	7,500	Prosperity (10)	17,300
Eva II (13)	20,500	Puritan (4)	106,500
Evelyn C. Brown (1)	285,000	Rose & Lucy (4)	63,500
Falcon (10)	37,500	Rosemarie (4)	58,000
Florence & Lee (1)	190,000	Rose Mary (1)	2,000
Flow (1)	245,000	Rosie & Gracie (6)	87,000
Frances R. (7)	133,000	Sacred Heart (7)	12,500
Frankie & Jeanne (7)	8,500	St. Anna Maria (7)	81,500
Gaetano S. (5)	720,000	St. Anthony (4)	436,000
Gertude E. (2)	1,500	St. Cabrini (7)	103,500
Giacoma (9)	31,800	St. Francis (14)	46,500
Golden Dawn (6)	30,500	St. John (8)	23,000
Helen M. (4)	58,500	St. Joseph (4)	58,000
Hilda Garston (1)	16,500	St. Mary (10)	110,500
Ida & Joseph (6)	346,000	St. Nicholas (1)	195,000
Immaculate Conception (6)	87,000	St. Peter (6)	135,000
Irma Virginia (10)	41,000	St. Providence (11)	32,500
Jackie B. (1)	24,000	St. Rosalie (4)	55,500
Jackson & Arthur (11)	18,000	St. Stephen (8)	36,500
J. B. Junior (1)	145,000	St. Teresa (4)	57,000
Jennie & Lucia (2)	126,000	St. Victoria (1)	7,000
Joseph & Lucia (1)	95,000	Salvatore & Grace (4)	120,000
Josie II (8)	30,000	Santa Lucia (2)	3,000
Judith Lee Rose (1)	290,000	Sebastiana C. (7)	121,000
Killarney (1)	180,000	Serafina N. (6)	75,000
Kingfisher (2)	435,000	Serafina II (5)	73,000
Kurtia (2)	2,000	Star of the Sea (2)	84,000
Lady of the Rosary (5)	131,500	Sunlight (1)	32,000
Linda B. (9)	28,500	Theresa M. Boudreau (3)	652,000
Little Flower (8)	75,000	Tipsy Parson (10)	18,500
Little Joe (4)	22,500	Trimembrat (8)	18,500
Lone Ranger (3)	9,500	Vagabond (5)	287,000
Luckimie (1)	211,000	Victoria (8)	7,000
		Villanova (3)	528,000
		Virginia Ann (5)	39,000
		White Owl (11)	22,000

Scallop Landings (Lbs.)

Brother Joe (1)	3,000	Michael F. Denamore (2)	22,000
-----------------	-------	-------------------------	--------

STONINGTON, CONN.

Bette Ann (9)	5,600	Marise (10)	7,400
Carolyn & Gary (13)	9,900	Mary H. (7)	3,600
Connie M. (8)	4,000	Old Mystic (13)	14,900
Dora & Peter (1)	400	Our Gang (1)	2,900
Fairweather (17)	18,100	Rose Mary (1)	800
Irene & Walter (14)	9,600	Weezie May (5)	3,200
Jane Dore (9)	5,600	William B. (9)	8,900
Lt. Thos. Minor (11)	11,700		

Key West Shrimp Sampling Program

The Key West, Florida, shrimp industry is greatly disturbed at the continual landing of small shrimp—more than about 60 to the pound. As a result, a sampling program of the shrimp on the Tortugas grounds is being conducted under the auspices of the Fish & Wildlife Service.

The purpose of the sampling program will be to devise methods of controlling the landings of small shrimp, if this is considered necessary. Three alternative methods of restricting fishing are being considered: closed areas, closed seasons, and mesh regulations.

A Key West shrimp trawler, the *Manboy*, was chartered for a period of twelve months to carry out two nights' fishing each month. The sampling program will determine the distribution of shrimp by lengths, both seasonally and geographically.

Cod ends of different mesh sizes are being used during the course of the sampling trips. These cod ends are loosely covered with one-inch mesh netting. Thus the escape behavior of shrimp through cod ends of different mesh sizes can be studied.

MORE POWER . . . MORE SPEED LESS WEIGHT . . . LESS SPACE

since a CAT D375 repowered the S#31!

The S#31 — a 75' x 17'6" x 11' scallop and trawling boat operating out of Brooklyn — is now repowered with a Cat D375 Diesel Marine Engine, and she's a better fishing boat than ever! She's 2 MPH faster, carries a bigger load of fish and pulls larger dredges faster. The Cat drives the S#31 through a 3 to 1 reduction gear with a 5-blade 52 x 34 propeller, requiring practically no adjustments — just start it and forget it! Auxiliary drives supply electrical, compressor and hoist power. The S#31 can ice 70,000 lbs. of loaded fish.

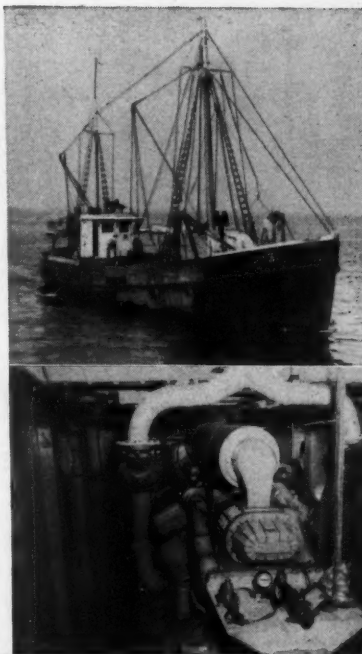
For dependable, economical power, it pays to choose a Cat Diesel Marine Engine sold and serviced by H. O. Penn Machinery Co. We will gladly recommend the best engine for your boat, stand behind it if you need parts and service. See us for complete details!

CATERPILLAR MARINE POWER

Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

H. O. Penn Machinery Co.

140th Street and East River, New York, N.Y.
1561 Stewart Avenue, Westbury, L.I., N.Y. Dutchess Turnpike, Poughkeepsie, N.Y.
136 Day St., Newington, Conn. Route 17, Tuxedo Park, N.Y.



Cat D375 Engine in the hold of the S#31. We have Cat Diesel Marine Engines developing up to 550 intermittent HP, including the new D397 (Series D) and new D375 (Series D).

No. Carolina Fishermen Make Good Early Croaker Catches

Unusual early catches of croakers have caused fishermen to wonder just what the coming season will bring. The latest such catch, on April 1, was estimated by officials of the N. C. Fisheries Assoc. to have put 20,000 one-hundred pound boxes into the holds of Virginia trawlers and about 7,000 boxes into the North Carolina trawlers. About one-half the catch was of medium size, small for this time of year. The catch was taken above Diamond Shoals, even farther north than an earlier similar catch in February.

Other light seasonal catches in the nets have been those of sea mullet, and there was an unusual run of large grey trout south of the Hatteras Lightship.

The catch of hard-shell crabs has been good in North Carolina waters, particularly so in Core Sound, but the market price for North Carolina crab meat dropped April 1 when the fisheries of Maryland and Virginia began their production. The cold weather has affected the soft-shell crab fishery. Other years the season was in full swing in April, but the cold weather has made the crabs hang on to their old shells.

Committee Seeks to Increase Oyster Yield

Raymond Carter of Shallotte Point has been made chairman of a committee of working watermen, selected to determine the factors responsible for the steadily continuing decline in oyster revenues, and to outline a program by which large, mature oysters may provide a supply consistent with greatly increased demand.

The committee is the result of a series of meetings in Raleigh and Shallotte at which Gov. Hodges and William P. Saunders of the State Dept. of Conservation and De-

velopment were asked for aid in developing an oyster rehabilitation program.

Serving on the committee with Carter are Thomas Gal-loway, Willie T. Robinson, Willie Clemmons, Will Ganus, Joe Smith, Harry Bennett and Vincent Hewett.

Big Catch of Drumfish

A catch of nearly 1,000 drumfish or channel bass was reported from Hatteras early last month. Charlie Daniels and crew of Wanchese were the lucky fishermen, and prices paid were reported at three cents a pound. The big fish travel in schools, and by surrounding them with a long seine, most all of them can be caught in a single set.

Good Menhaden Season

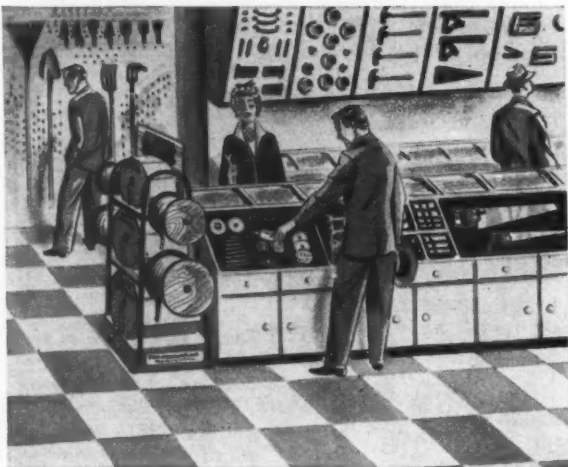
Receipts of fish and shellfish at North Carolina ports during January amounted to 18.5 million pounds. Menhaden led all other items in volume landed during the month, finishing a very successful menhaden season. Total landings of these fish during the period June 1955 through January 1956 amounted to 188.5 million pounds.

Scallop Season Extended

The season for taking scallops has been extended through May 31. Fisheries Commissioner Holland said the extension was granted for the same reason the shad and herring and crab pot seasons were lengthened—bad weather.

Good Market for Oysters

C. G. Holland, State Fisheries Commissioner, in his report for the first three months of 1956, stated that the market for oysters remained firm during this entire period, and production in the oyster shucking houses showed an increase over last year. Scallops also showed an increase in production, and the market was firm.



NEW BEDFORD ROPE Product of 114 Years of Progress

Quality-controlled materials . . . improved methods based on 114 years' know-how . . . and progressive merchandising and packaging for your convenience—these achievements help make New Bedford the world's best rope buy.

First Choice of Fishermen and Fleet Owners because:

- It's tough and strong.
- Laid right for easy handling.
- Treated for protection against moisture and dry rot.
- Lubricated to reduce internal friction.

AVAILABLE AT YOUR JOBBER



**NEW BEDFORD
CORDAGE COMPANY**
NEW BEDFORD, MASSACHUSETTS
Serving the Maritime Industry Since 1842

Mississippi Plant Packs Tuna On Experimental Basis

The first large-scale experimental packing of Gulf tuna was undertaken April 23 at the Seacoast Packing Co. in Biloxi. One ton of yellowfin tuna, yielding approximately 40 to 50 cases, was processed.

This marked the first step in an experimental program between the U. S. Fish and Wildlife Service, Bluff Creek Canning Co., and the Seacoast Packing Co. The tuna were caught on the *Oregon*, a 100 ft. steel hull tuna clipper style boat that has its home base in Pascagoula.

According to Harvey R. Bullis of Pascagoula, chief of the Fish & Wildlife Service's Gulf of Mexico exploratory fishing program, it looks like there is a year-round supply of yellowfin tuna in the Gulf. The recent tuna processing at Biloxi was done in an effort to see what could be accomplished with the processing equipment now available in the local factories. It was pointed out that any step in the direction of a year-round or seasonal tuna industry would require many modifications in the present factory program, a great deal of capital, and new equipment along with the possibility of employing more workers.

The advantages of a tuna industry along the Gulf Coast are many. Along the Pacific Coast the tuna fishing grounds are open only nine to ten months a year, while the Gulf grounds could be open 12 months. In addition, the Gulf tuna fishing grounds are much nearer to port, being located no more than one to two hundred miles from Biloxi and the canneries. Average weight of the yellowfin tuna is 110 pounds.

The three problems in developing a Gulf Coast tuna industry are: fish production, fish processing and fish marketing. Since the commercial supply of tuna seems to be extensive, the largest problems rest in processing (involving new equipment and methods) and the finding of available and profitable markets.

One drawback is that Biloxi's channel is too shallow for the large boats required. The possibility of bringing the fish into the deeper Pascagoula channel and trucking them into Biloxi has been discussed.

Oyster Take Shows Increase

Mississippi's oyster yield for March climbed to 62,400 barrels, but the State shrimp catch for the month fell to 705 barrels, according to the Miss. Seafood Commission. The oyster take has been climbing since the season opened in January. For that month the total haul was 11,600 barrels, and in February it totalled nearly 32,000 barrels.

"Oregon" Makes Good Tuna Catch

The Fish & Wildlife Service's exploratory vessel *Oregon* returned to Pascagoula on April 17 with 26 tons of yellowfin caught during the previous four weeks. As a result of this cruise it is believed that yellowfin tuna abound in the Gulf of Mexico in commercial quantities the year-round.

The fish were taken from the southwestern Gulf of Mexico on 17 sets, with a total of 10,000 hooks. The southeastern Gulf of Campeche yielded the best catches.

Connecticut Fleet Gets Additions

Two additional boats started fishing with the Stonington dragger fleet during the past month. The *Dora* and *Peter*, Capt. George Roderick of Stonington, and the *Rose Mary*, Capt. Bert Simmons from Maine, both started operating out of the port late last month.

Fishing conditions were poor during April, with fog, high winds and generally inclement weather hampering the draggers. Market fish landings were well below normal, with only 106,600 pounds reported.

Long Island Association Recommends Planting Seed Oysters in Bay

The Long Island Fishermen's Assoc. has suggested that the town of Islip purchase and plant 200 bushels of seed oysters in town waters. They feel that it is possible to reactivate what was once a multi-million-dollar industry. Water conditions in the Great South Bay have improved to such an extent that veteran baymen now believe the time has come for full-scale planting of seed oysters in these waters.

Among those who are in favor of the plan to plant seed oysters are Nicholas Griek, secretary of the Association, and Capt. Minard Zegel of West Sayville, a bayman for over 50 years. Zegel pointed out that the town already spends about \$1,000 a year for the placing of seed clams in Great South Bay, and he feels that there is a bright future for the oyster industry if seed oysters are planted in the near future.

Oysters are available from an eastern Long Island source for \$2.75 a bushel delivered. They are adult and small oysters which, according to experienced baymen, lend themselves to restocking and propagation purposes.

Landings Show Gain in Value

Landings of fish and shellfish in the Marine District of New York during January totalled 3.0 million pounds, valued at nearly \$658,000 to the fishermen. Compared with the volume and value of the receipts reported for the same month of last year, this was a decrease of 27 percent in quantity, but a gain of 3 percent in value. Increases in the January value of oysters and some of the more important finfish species accounted for this gain.

During January, 26 vessels making 60 trips landed a total of 1.9 million pounds of fish and shellfish at the New York Fulton Market. Otter trawlers caught 95 percent of this production, while scallop dredgers accounted for the balance.

Powering of Pakistan Fishing Boats Recommended by FAO

More than a thousand fishing boats in the Karachi administration area and some hundreds on the Makran and Sind coasts may provide a lucrative market for manufacturers of fishing boat engines, if plans develop for the powering of the Pakistan fishing fleets. Most of the existing boats, which range from small craft to vessels of 60 ft. overall, are suitable for mechanization, according to a report submitted by the Food and Agriculture Organization (FAO) to the Government of Pakistan.

The FAO Naval Architects have recommended that the small Pakistan boats be equipped with heavy duty, low speed outboard motors of about 4 hp., with 12-in. extended shafts and bronze underwater parts. In the case of the bigger boats, especially the "bedi" types which range from about 44 to 60 ft., it is recommended that inboard motors of about 20 hp. be installed, preferably semi-Diesels or Diesels.

After extensive investigations and model tests, the FAO Naval Architects found that most Pakistan fishing boats are comparable and, in many cases, superior—so far as resistance is concerned—to the design of fishing boats in Europe and North America. As a result, the architects reported that the resistance of West Pakistan boats could be decreased only 10-20% by means of improved hull design, compared with a decrease of 30-40% which they usually had found feasible in the ordinary fishing boats of western countries.

The practical effect of such improvement in hull design is to increase the speed of the boat without adding to the power of the engine. Considerable savings also can be made in fuel consumption, sometimes as much as 30 percent, if the speed is kept constant.



The "TEXAS," 150 ft. Menhaden boat owned by Atlantic Navigation Co., built by Burton Shipbuilding Co., Inc.



YOU PAY LESS FOR MORE SAFETY WITH DANFORTHS*

You can equip any boat or ship with Danforth* anchors for less money and more safety than if you selected any other brand of anchor. This is important to know if you specify or purchase anchors for any type of vessel, whether it comes under A.B.S. jurisdiction or not. For more information, write for the new edition of "Anchors and Anchoring," our 16-page illustrated booklet. Danforths* are made of the finest steels. Sizes from 2½ lbs. to 21,000 lbs.

*Reg TM

DANFORTH® ANCHORS

2137 Allston Way, Berkeley 4, Calif.



Here's the
REASON
MICHIGAN
WHEELS
LAST SO MUCH
LONGER!

20" TO
60" DIA



Shown above are ingots of MICHALLOY-K, a very special alloy from which MICHIGAN WHEELS are cast. Every ounce of it is composed of pure VIRGIN METALS, not one particle of scrap is ever used.

It greatly exceeds the U.S. Navy Spec. 49 b3f for tensile strength, yield and elongation and is exceptionally resistant to corrosion and electrolysis. Hence in length of service, as well as finer performance, your best bet by far is a MICHIGAN wheel. See your Michigan dealer or write for catalog.

MICHIGAN WHEEL CO.
GRAND RAPIDS 3, MICHIGAN

"STAR" — SMOOTHEST THING IN WHEELS

TOPS IN EVERYTHING BUT PRICE! DALE PLASTIC FLOATS



Every One Unconditionally Guaranteed

Specifically Designed For Fishing Areas In Which They Are To Be Used—Deep Or Shallow Water

- ★ Maximum Buoyancy
- ★ Will Not Absorb Water
- ★ Will Not Support Marine Life

ALL GILL-NET SIZES FROM 1½" x 5" to 5" x 9"
ALSO SEINE NET FLOATS

Contact Your Local Distributor Or Write For Information
Dealer Inquiries Also Invited

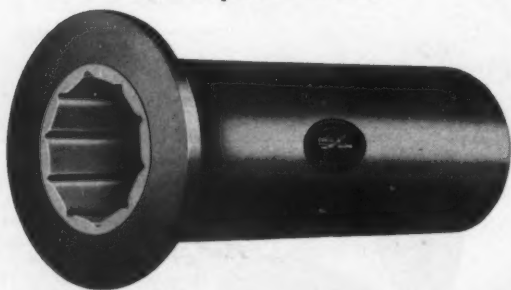
DALE PLASTICS CORPORATION
"Finest Floats Afloat"

5736 Twelfth St.

Detroit 8, Mich.

B.F. Goodrich Cutless Bearings

For Propeller Shafts



Soft rubber, water lubricated, Cutless bearings give years of trouble-free service on fishing vessels. Resist heat, oil, and wear. Quiet and protect shafts too. There is a size and type to fit your boat.

Available at Boat Repair Yards and Marine Equipment Dealers.

Lucian Q. Moffitt, Inc.

AKRON 8, OHIO

Engineers and National Distributors

FOREIGN BAILINGS

USE OF ANTIBIOTICS TO PRESERVE FISH proved successful in tests carried out in Norway recently. Newly-caught fish were kept fresh for 19 days through simple expedient of adding small quantities of crude Aureomycin to water from which ice was made. With ordinary ice, fish could be kept only up to 12 days.

If new preservation method proves practical, it will be significant advantage to Norwegian fresh fish industry, especially for shipping fresh cod from North Norway to large British market.

NEW TYPE FACTORY TRAWLER has been completed by German shipyard. It is result of many post-war experiments with various designs, including propulsion units, steering propeller, and automatic stern-trawl winch.

New vessel has cruiser-type lines (pilothouse mounted forward of midship) with an over-all length of about 218', breadth of 32.8', and draft of about 14'. She was designed for speed of 13 knots an hour, developed from two 600 hp. Diesels which are located just forward of Voith-Schneider propeller.

From extensive tests carried out aboard rebuilt trawlers and new types of vessels in Polar Seas, it has been found that automatic stern winch facilitates hauling fish aboard and results in far greater catches.

MOBILE SCHOOLS IN NOVA SCOTIA are training fishermen in engine maintenance. Recently in Halifax new "Bluenose Princess", 40' shopmobile trailer big enough to accommodate 12 men for gasoline-engine instruction or eight men for Diesel-engine instruction, was added to training program. It was second such shopmobile equipped to offer 4-week courses to fishermen.

Nova Scotia's fishing industry is advancing with mighty strides. By 1954 landed value of fish was more than four times pre-war figure. Quantity has increased by close to 40 percent.

MEXICAN WEST COAST SHRIMP FISHING SEASON in 1955-56 was one of the most successful, due to excellent production and a high price level. Imports of shrimp to March 17, 1956, from Mexico and entering United States through Arizona and California, totaled 28.6 million pounds, as compared with 12.4 million pounds in similar period of 1954-55.

SOUTH AFRICA IS PROMOTING FISH SALES by means of Union-wide advertising and publicity. This campaign, now in full swing, is doing much to make people of South Africa more fish conscious. It has been conducted simultaneously with development of quick-frozen fillets and fish sticks by a processing firm.

SPANISH COD FLEET now comprises some 23 otter trawlers and 40 to 60 pair-trawlers. A study of the two kinds of vessels indicates that compared to expenses involved, yield of pair-trawlers is larger than that of otter trawlers.

RED SHRIMP RETURNED TO GULF OF PANAMA recently, and catches have been heavy. Total production was expected to reach 1 million pounds, whereas catches in previous years have not exceeded 300,000 pounds.

MEETING IN NETHERLANDS of fish processing technologists will take place at Rotterdam from June 25 to 29. It will be an International meeting, and is being organized by Interim Committee on Fish Handling and Processing of Food and Agriculture Organization of the United Nations.

A Symposium on Chilling of Fish will deal with use of antibiotics, bacteriostatic ices and dips, brine cooling, sea water ice, scale and crushed ice, and fresh fish quality assessment.

New RITCHIE FISHERMAN'S BRACKET

An Economical Mount where
quadrantal spheres are needed



Price complete, compass and spheres—\$96.50

Bracket is one piece solid bronze which provides strength and economy, and assures positive alignment of compass and 3½-inch spheres. Compass unit is standard 6" Ritchie flat top.

E. S. RITCHIE & SONS INC.
PEMBROKE, MASS. Established 1850

Morro Bay Oysters

(Continued from page 17)

building will be 100 by 53 feet in area, and will contain the latest stainless steel equipment for packing oysters.

While Mrs. Leage sells some glassed oysters to chain stores direct, most of the production is distributed through the Western Fish Co. and Freeman Certi-Fresh Sea Food Co., both of Los Angeles.

Morro Bay oyster enemies are negligible. The shovel-nosed shark samples a few oysters, but nothing to lose sleep over. More damage is done by the 2 to 4' wide sting ray, which weighs up to 60 lbs. This miniature sea bat breaks down posts in the fences separating the oyster flats, and crunches many oysters in its powerful jaws. But even the rays cause little damage. Starfish and other pests are noticeably absent.

Morro Bay oysters feed on plankton in the intruding sea water, also from rotted plant growth and sea mosses, bird guano, etc. The oysters in Morro Bay grow prodigiously. They do not toughen in cooking, and are delectable for stews and cocktails, and fried like steaks.

There are some 2200 acres of Morro Bay bottom, which allows plenty of room for expansion of the oyster industry. The Federal Government recently appropriated \$625,000 to be used in dredging Morro Bay channels and rebuilding the great stone causeway breakwater, which was breached by the heavy seas that pounded the seacoast during the Winter. The money will be divided as follows: \$400,000 to dredge the lower bay, boat channels, fishing fleet anchorages, and inner bay channels; and \$225,000 to repair the sea wall. The work will start in June, 1956.

The entrance to the harbor is marked by famed old Morro Rock, 576' tall. Discovering Spaniards named it Morro Rock when they first sailed along these coasts. But they didn't tarry long enough to find out about the delicious oysters growing in profusion on the bay bottom.

World's BEST Marine Battery



Surrrette MARINE BATTERIES

Surrrette Storage Battery Company, Inc., Jefferson Avenue, Salem, Mass.

WOLVERINE



MARINE DIESEL ENGINES

WOLVERINE LOW and MEDIUM SPEED
170 H.P. to 400 H.P.

WOLVERINE and WAUKESHA HIGH SPEED
170 H.P. to 525 H.P.



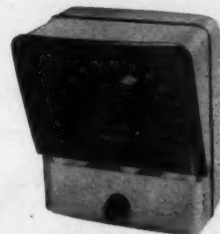
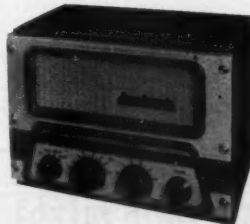
For sales and service contact: WOLVERINE MARINE DEPARTMENT

THE COULTER & MCKENZIE MACHINE CO.
771 WATER ST., BRIDGEPORT 3, CONN., Phone EDison 5-1101

HARRIS ELECTRONICS offers

Raytheon's New
Depth Sounder
\$149.50 complete

Model DE-122 with transducer
Accurate readings 2 to 120 ft.



Pearce-Simpson
Islander 30
\$395.00 plus antenna

Five channels and broadcast band. Built-in noise limiter. Prices subject to change.

Harris

ELECTRONICS CORP.

48 Ocean St.
Telephone
Spruce 3-4833
So. Portland,
Maine

Get FREE

Booklet on

Radio

Telephones

Gentlemen: Send Radio Phone Booklet ☐
Data on Phones ☐ Depth Sounders ☐

Name _____

Street _____

Town _____

State _____

MUSTAD

Key Brand FISH HOOKS

Quick, deep penetration plus tenacious holding power. That's what Mustad fish hooks give you. Their sharp points take hold quickly and sink in deep and their sturdy Mustad-tempered bends and shanks hold your catch until you bring it into your boat. Next time you buy hooks get Mustad hooks. Remember . . . Mustads.

O. MUSTAD & SON

Established 1832
OSLO NORWAY

Sales Agents
Ed. W. Simon Co., Inc.
320 Broadway, New York 7

H. L. Bowlds & Son
2345 W 3rd St. 17070 Hamlin Rd.
Los Angeles 57 Seattle 55



NETS • RAKES • TONGS

Bait Netting - Wire Baskets
Rope - Lobster Pot Heading Twine - Corks

LARGE STOCK

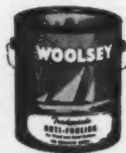
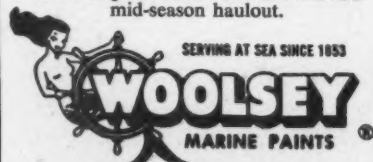
Prompt, intelligent, personal attention to your order

W. A. AUGUR, Inc.

35 Fulton Street New York 38, N. Y.
BEekman 3-0857

STOP EXPENSIVE HAULOUTS!

Conventional bottom paints can't give you the longer-lasting fouling resistance of "TRADEWINDS" Anti-Fouling. Bottoms protected with this highly-toxic Woolsey formula remain clean...and this remarkably efficient repellent also insures excellent slip and smoothness. Repaint with "TRADEWINDS" and forget that mid-season haulout.



C. A. Woolsey Paint & Color Co. Inc., 229 East 42nd Street, N. Y. 17, N. Y.
Warehouses: Brooklyn, N. Y., Plymouth, N. C., Jacksonville, Fla., Houston, Tex.

New Bedford Scallop Publicity Producing Good Results

A nation-wide scallop advertising campaign sponsored by the New Bedford Seafood Council is paying off well. More than 5,000 requests were received for the booklet on scallop recipes offered in the Council's ads for one month.

Last year \$17,000 was used for paid advertising in magazines, newspapers, radio, television and personal contacts and demonstrations. This year approximately \$24,000 is planned for paid advertising. The advertising and publicity has spurred sales of scallops and kept the price average 50 percent higher for the first part of 1956, as compared to prices paid two years ago.

Publicity material on New Bedford-produced flounder soon will be in the hands of 285 newspapers, radio and TV stations in 12 Eastern States. In addition, 500 retail fish markets in New England and New York will have display posters and recipe cards inviting customers to try New Bedford flounders.

Trash Fish Boat Sinks

The 57-ft. trash fish boat *Sister Alice* went to the bottom off Nomansland April 23. Her three-man crew was picked up by the *Barracuda* and brought into New Bedford. Joseph Lima of New Bedford was owner and skipper of the ill-fated craft, formerly called the *Lillian* and *Anna S.*

"New Bedford" Repowered

The scalloper *New Bedford*, owned by Mike Smith of New Bedford, has been repowered with a Cooper-Bessemer 240 hp. engine. Aeroquip flexible hose was used in the installation, which was made at the Hathaway Machinery Co., Fairhaven. Hathaway is the agent for Aeroquip in the area.

The engine aboard the *Mary Ann*, owned by Charles Tapper, recently has been overhauled at Hathaway's.

City Buys Fish Island

The City Council has authorized the purchase of Fish Island, and its acquisition is for marine development, according to Mayor Lawler. It is understood that the Coast Guard is interested in the wharfside, as a possible berthing site.

Report Widespread Haddock Spawning

The Fish & Wildlife Service vessel *Albatross III* returned to Woods Hole on April 28 from a cruise to determine the distribution of haddock eggs and larvae, temperature and salinity and the general circulation pattern in the Gulf of Maine and Georges Bank area.

Haddock, cod, plaice and rockling eggs; haddock, cod, herring, hake and ammodytes larvae were found. Haddock eggs were found at all locations sampled except in the central Gulf of Maine.

If this widely-spread spawn is successful in meeting the vicissitudes of life in the ocean waters, there will be good haddock fishing on Georges Bank three and four years from now.

Future cruises of the *Albatross* will follow the drift of these young fish in May and June, and a census will be made in September after they have taken up life on the bottom and are no longer at the mercy of tide and current.

Ten-Pound Salmon Caught

A 10-pound salmon was caught off Georges Banks early last month by the dragger *Pauline G.*, captained and owned by Leif Jacobsen of Fairhaven.

New Yarmouth Shellfish Rules

Shellfish regulations for the town of Yarmouth, effective May 1, were released recently by Selectmen. Regulations provide that scallops and oysters may not be taken

until further notice and that the town portions of Lewis Bay are closed for the dredging of quahogs until further notice.

Areas closed to all types of shellfishing are Mill Creek, Colonial Acres in West Yarmouth, Dinah's Pond in Yarmouth, and north of Yarmouth between the town boundaries, except that quahogs may be taken for family use only from Mill Pond and for 500 feet north of Mill Pond bridge.

Commercial fishermen may take quahogs on weekdays, but not more than two bushels of littlenecks and cherry-stones and one bushel of chowders, and no more than a total of three bushels a day until further notice. Commercial fishermen also may take soft-shell clams on Tuesdays and Saturdays, but only 1 bushel a day.

Sea worms may be taken by commercial fishermen on weekdays, but not more than 300 a person a day.

Woods Hole Laboratory to be Rebuilt

Woods Hole laboratory buildings of the Fish & Wildlife Service and hurricane-damaged docks are scheduled to be dismantled and replaced. An appropriation of \$980,000 for construction of a modern three-story laboratory building is included in the budget of the Department of Interior, and has been approved by both houses of Congress.

Boston Hearing Favorable to Fish Culling, Weighing Standards

Proposed standards for regulating the culling and weighing of fish in Massachusetts ports were approved unanimously by fishermen, boat owners and dealers at a public hearing in Boston last month.

Commissioner Ernest A. Johnson of the State Dept. of Labor and Industries, who conducted the session, took the recommendations under advisement. After a study, the weighing and cull regulations will become effective upon notice by the Commissioner.

The recommended standards for a uniform fish weight and cull were drafted by a special advisory committee appointed by Gov. Herter's Labor-Management Committee to promote the fishing industry.

"Delaware" Continues Deep-Water Explorations

The exploratory vessel *Delaware* returned to Boston on April 21 after a cruise to explore the deep-water fishery resources at the edge of the Continental Shelf, in the Grand Banks area.

High wind and snow permitted completion of only 14 tows in deep water, with a total of 25,700 pounds of ocean perch being taken in the 150-400 fathom depth range. Contrary to expectations, the ocean perch taken were of a very small size, ranging from 0.6 to 1.1 pounds.

The *Delaware* was scheduled to leave East Boston on April 30 to continue exploration for deep-water lobsters at the edge of the Continental Shelf.

Atlantic Coast Fisheries Moves Headquarters

The Atlantic Coast Fisheries Co. moved its general administrative headquarters on April 2 from the Boston Fish Pier to 211 Congress St., Boston. Production lines will continue as before at Boston and Provincetown, Mass.; Monterey, Calif.; Nova Scotia and Newfoundland.

Crowther Rejoins Fish & Wildlife Service

Harold E. Crowther rejoined the Fish & Wildlife Service on April 4, after an absence of nearly three years. In 1953 he resigned as Chief of the Technological Section to conduct research work for the Atlantic Coast Fisheries Co. in Boston. For the past year he has been the executive vice-president of the Company. In his new position, Mr. Crowther will act as coordinator of the Saltonstall-Kennedy projects for the Fish & Wildlife Service.



*For More
Efficient Fishing*

WHITE AUTOMATIC PILOT

You simply dial your desired course, and the White Automatic Pilot does the rest. Fog dodging, you have portable remote steering control on a 25 ft. cable. Suitable for boats 20-50 feet in length. 6, 12, 32 V, D.C. Low current consumption because of non-hunting.

Easy to install. Write for complete information. \$397.50

WILFRID O. WHITE & SONS, INC.

(Formerly Kelvin-White Company)

178 ATLANTIC AVE., BOSTON 10, MASS.

406 Water St., Baltimore 2, Md. 40 Water St., New York 4, N. Y.
EXPORT DEPT.: 100 E. 42nd St., New York 17. Cable: PHILYORK

WESTERN NET SHOP

"WESTERN JIB" TRAWLS

Patent Pending

"Speck" Harris

"Whistle" Rhodes

FREEPORT, TEXAS

Columbian

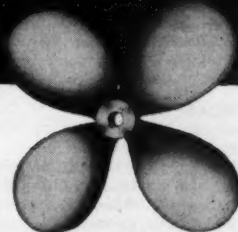
4-BLADERS

are standard throughout today's fishing industry, from California to Maine. Experienced owners and fleet-owners know these Columbians just can't be beat for rugged dependability, economical operation.

SEND FOR CATALOG

COLUMBIAN BRONZE CORPORATION

Freeport, L. I., N. Y.



ELDREDGE-McINNIS, INC.

NAVAL ARCHITECTS

MARINE ENGINEERS

Specializing in Fishing Vessel Design

131 State St., Boston 9, Mass.

Walter J. McInnis

Alan J. McInnis

4-71 G. M. DIESEL ENGINES

2-TO-1 REDUCTION GEARS

6-71 All Reduction Gears

Large stock of engines and parts, 71 series marine and industrial.

DIESEL CORP. OF N. J.

1473-79 McCarter Highway, Newark 4, N. J.

Humbolt 2-7881

WHERE-TO-BUY DIRECTORY

ANCHORS

Danforth Anchors, 2121 Allston Way, Berkeley, Calif.
The Maxim Silencer Co., 126 Homestead Ave., Hartford, Conn.
Northhill Co., Inc., Los Angeles 45, Calif.

ANTIBIOTICS

Chas. Pfizer & Co., Inc., 630 Flushing Ave., Brooklyn 6, N. Y.

BATTERIES

Bowers Battery & Spark Plug Co., Reading, Pa.
Crescent Battery & Light Co., Inc., 819 Magazine St., New Orleans 12, La.
Exide Industrial Division—The Electric Storage Battery Co., 42 South 15th Street, Philadelphia 2, Pa.
Surrette Storage Battery Co., Salem, Mass.
Willard Storage Battery Co., 246 East 131 St., Cleveland 1, Ohio.

BOOTS

United States Rubber Co., Rockefeller Center, New York, N. Y.

CANS

Continental Can Co., 100 E. 42nd St., New York, N. Y.

CLOTHING

The H. M. Sawyer & Son Co., Cambridge, Mass.
A. J. Tower Co., 24 Simmons St., Boston, Mass.
United States Rubber Co., Rockefeller Center, New York, N. Y.

COLD STORAGE

Quaker City Cold Storage Co., Philadelphia, Pa.

COMPASSES

John E. Hand & Sons Co., Atlantic & Washington Avenues, Haddonfield, N. J.
Marine Compass Co., Pembroke, Mass.
E. S. Ritchie & Sons Inc., Pembroke, Mass.
Wilfrid O. White & Sons, Inc., 178 Atlantic Ave., Boston 10, Mass.

CORDAGE

American Manufacturing Co., Noble and West Sts., Brooklyn, N. Y.
Cating Rope Works, Inc., Maspeth, N. Y.
Columbian Rope Co., Auburn, N. Y.
The Edwin H. Fitter Co., Philadelphia 24, Pa.
New Bedford Cordage Co., 131 Court St., New Bedford, Mass.

COUPLINGS

Morse Chain Co., Ithaca, N. Y.

DEPTH SOUNDERS

Bendix Aviation Corp., Pacific Div., 475 Fifth Ave., New York 17, N. Y.
Edo Corporation, College Point, L. I., N. Y.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Raytheon Manufacturing Co., 138 River St., Waltham 54, Mass.
Wilfrid O. White & Sons, Inc., 178 Atlantic Ave., Boston 10, Mass.

DIRECTION FINDERS

Bludworth Marine, 92 Gold St., N. Y. 7, N. Y.
Kaar Engineering Corp., Palo Alto, Calif.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Raytheon Manufacturing Co., 138 River St., Waltham 54, Mass.

ELECTRIC GENERATING PLANTS

D. W. Onan & Sons, Inc., University Ave., S.E. at 25th, Minneapolis 14, Minn.

ENGINES—Diesel

Allis-Chalmers, Buda Division, Harvey, Ill.
Caterpillar Tractor Co., Peoria, Ill.
Cummins Engine Co., Columbus, Ind.
Detroit Diesel Engine Div., General Motors Corp., Series 51, 71 and 110 Marine Diesels, 13400 W. Outer Drive, Detroit 28, Mich.
Enterprise Engine & Machinery Co., 18th and Florida Sts., San Francisco 10, Calif.
Fairbanks, Morse & Co., Chicago, Ill.
Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.
P&H Diesel Engine Division Harnischfeger Corp., 500 S. Main Street, Crystal Lake, Illinois.
Hercules Motors Corp., 101 Eleventh St., S.E., Canton, Ohio
Nordberg Mfg. Co., Milwaukee 1, Wis.
H. O. Penn Machinery Co., Inc., East River and 140th St., New York, N. Y.
Perkins-Milton Co., Inc., 376 Dorchester Ave., South Boston 27, Mass.
Red Wing Marine Corp., Red Wing, Minn.
White Diesel Engine Division, White Motor Co., Springfield, Ohio.
Wolverine Marine Dept., The Coulter & McKenzie Machine Co., 771 Water St., Bridgeport 3, Conn.

ENGINES—Gasoline

Chris-Craft, Marine Engine Div., Algonac, Mich.
Chrysler Corp., 12211 East Jefferson, Detroit, Mich.
Ford Marined Engines, 3627 N. Lawrence St., Philadelphia 40-AF, Penna.
Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.
Nordberg Mfg. Co., Milwaukee 1, Wis.
Red Wing Marine Corp., Red Wing, Minn.

ENGINES—Outboard

Evinrude Motors, 4670 N. 27 St., Milwaukee 16, Wis.
Johnson Motors, 6300 Pershing Rd., Waukegan, Ill.
Kiekhaefer Corp., Fond du Lac, Wis.

ENGINE CYLINDERS—Diesel

Porous Chrome Plated: Van Der Horst Corporation of America, Olean 3, N. Y.

FISHING GEAR

The Harris Co., Portland, Me.
Westerbeke Fishing Gear Co., Inc., 279 Northern Ave., Boston, Mass.

FLEXIBLE HOSE LINES

Aeroquip Corp., 300 South East Ave., Jackson, Mich.

FLOATS

Dale Plastics Corp., 5736 12th St., Detroit 8, Mich.
J. H. Shepherd Son & Co., Elyria, Ohio.
B. F. Goodrich Sponge Products Division, Shelton, Conn.

GAS—Bottled

Suburban Marine Service, Div. of Suburban Propane Gas Corp., Whippany, N. J.

GENERATING SETS

Allis-Chalmers, Buda Division, Harvey, Ill.
Detroit Diesel Engine Div., General Motors Corp., Series 51, 71 and 110 Marine Diesels, 13400 W. Outer Drive, Detroit 28, Mich.

GENERATORS

The Safety Car Heating & Lighting Co., Inc., Box 904, New Haven 4, Conn.

HOOKS

O. Mustad & Son, Oslo, Norway.
"Pfueger": Enterprise Mfg. Co., 110 Union St., Akron, Ohio.

INSULATION

"Styrofoam" (Expanded Dow Polystyrene): The Dow Chemical Co., Midland, Mich.

LIFE BOATS

Beetle Boat Co., Inc., Ft. Grinnell St., New Bedford, Mass.

LORAN

Edo Corporation, College Point, L. I., N. Y.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Sperry Gyroscope Co., Division of the Sperry Corp., Great Neck, N. Y.

MOTOR GENERATORS

The Safety Car Heating & Lighting Co., Inc., Marine Div., P.O. Box 904, New Haven 4, Conn.

NETS

Adams Net & Twine Division, The Linen Thread Co., Inc., 701 N. 2nd St., St. Louis, Mo.
W. A. Augur, Inc., 35 Fulton St., New York.
Ederer Division, The Linen Thread Co., Inc., 540 Orleans St., Chicago, Ill.
The Fish Net & Twine Company, 310-312 Bergen Ave., Jersey City, N. J.
The Linen Thread Co., Inc., 105 Maplewood Ave., Gloucester, Mass.
Joseph F. Shea, Inc., East Haddam, Conn.
A. M. Starr Net Co., 10 Summit Street, East Hampton, Conn.
Sterling Net & Twine Co., Inc., 164 Belmont Ave., Belleville, N. J.
Western Net Shop, Freeport, Texas.

NET LIFTERS

Crossley Co., 16 West 5th St., Erie, Pa.

OIL—Lubricating

Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.
Socony Mobil Oil Co., Inc., Marine Sales Dept., 26 Broadway, New York 4, N. Y.
Standard Oil Co. of California, Standard Oil Bldg., San Francisco, Calif.

PAINTS

Henderson & Johnson, Inc., Gloucester, Mass.
International Paint Co., Inc., 21 West St., New York, N. Y.
Pettit Paint Co., Belleville, N. J.
Tarr & Wonslow Ltd., Gloucester, Mass.
C. A. Woolsey Paint & Color Co., Inc., 229 East 42nd St., New York 17, N. Y.

PROPELLERS

Columbian Bronze Corp., Freeport, N. Y.
Federal Propellers, Grand Rapids, Mich.
Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.
Hyde Windlass Co., Bath, Maine.
Michigan Wheel Co., Grand Rapids, Mich.

PROPELLER RECONDITIONING

Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.

PROPELLER REPAIRS

Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.

PROPELLER SHAFTS

The American Brass Co., Waterbury 20, Conn.
The International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.

PUMPS

Jabco Pump Co., 2031 N. Lincoln St., Burbank, Calif.
Sudbury Laboratory, South Sudbury, Mass.

RADAR

Bendix Aviation Corp., Pacific Div., 475 Fifth Ave., New York 17, N. Y.
Edo Corporation, College Point, L. I. N. Y.
Lavole Laboratories, Inc., Morganville 16, N. J.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

RADIO TELEPHONES

Applied Electronics Co., Inc., 1246 Folsom St., San Francisco, Calif.
Bludworth Marine, 92 Gold St., New York 38, N. Y.
Harris Electronics Corp., 48 Ocean St., So. Portland, Me.
Hudson American Corp., 25 West 43rd St., New York 18, N. Y.
Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.
Raytheon Mfg. Co., 138 River St., Waltham 54, Mass.

RANGES—Galley

The Marine Mfg. & Supply Co., 34 New Street, New Brunswick, N. J.
Suburban Marine Service, Div. of Suburban Propane Gas Corp., Whippany, N. J.
Harry C. Weiskittel Co., Inc., 4901 Pulaski Highway, Baltimore 24, Md.

REDUCTION GEARS

Snow-Nabstedt Gear Corp., Welton St., Hamden, Conn.
Twin Disc Clutch Co., 1341 Racine St., Racine, Wis.
The Walter Machine Co., Inc., 84 Cambridge Ave., Jersey City 7, N. J.

RUST PREVENTIVES

Sudbury Laboratory, South Sudbury, Mass.

SEAM COMPOUNDS

L. W. Ferdinand & Co., Inc., Mica Lane, Newton Lower Falls 62, Mass.

SHIPBUILDERS

Blount Marine Corp., Warren, Rhode Island.
Diesel Engine Sales Inc., St. Augustine, Fla.
Harvey F. Gamage, So. Bristol, Maine.
Gladding-Hearn Shipbuilding Corp., 1 Riverside Ave., Somerset, Mass.
Morehead City Shipbuilding Corp., Morehead City, N. C.
Frank L. Sample & Son, Inc., Boothbay Harbor, Me.

SILENCERS

The Maxim Silencer Co., 126 Homestead Ave., Hartford, Conn.

STEERING GEAR

Metal Marine Pilot, 342 Golden Gate Ave., Tacoma, Wash.
Sperry Gyroscope Co., Division of the Sperry Corp., Great Neck, N. Y.

STERN BEARINGS

"Goodrich Cutless": Lucian Q. Moffitt, Inc., Akron 8, Ohio.
Byron Jackson Division, Borg-Warner Corporation, Box 2493, Terminal Annex, Los Angeles 54, Calif.

V-BELTS

Flexible Steel Lacing Co., 4683 Lexington St., Chicago 44, Ill.

VOLTAGE REGULATORS

The Safety Car Heating & Lighting Co., Inc., Box 904, New Haven 4, Conn.

WINCHES

Bodine & Dill (formerly Hettinger Engine Co.), Bridgeton, N. J.
Hancock Marine, 1567 No. Main St., Fall River, Mass.
Hathaway Machinery Co., Inc., New Bedford, Mass.
Stroudsburg Engine Works, 62 North 3rd St., Stroudsburg, Penn.

WIRE ROPE

American Steel & Wire Division, United States Steel, Rockefeller Bldg., 614 Superior Ave., Cleveland 13, Ohio.
John A. Roebeling's Sons Co., Trenton 2, N. J.
Wickwire Spencer Steel Division of The Colorado Fuel & Iron Corp., Palmer, Mass.

FOR SALE

A.C. & D.C. DIESEL GENERATOR SETS

A.C. SETS

(3) 200 KW G.M. model 8-268A—8 cyl.—air starting— $6\frac{1}{2}$ X 7—heat exchanger cooled—driving Westinghouse generator—200 KW—440/3/60—1200 RPM—with direct connected exciter and complete with panel board for generator, engine starting air compressor and starting air tanks. Reconditioned by U. S. Navy. Units in excellent condition. Price on request.

(2) 25 KW—Fairbanks-Morse engine model 36A4 $\frac{1}{4}$ —4 $\frac{1}{2}$ X 6—40 HP at 1200 RPM—electric starting—radiator cooled—typical serial #832034. GENERATOR: G.E. 25 KW—440/3/60—1200 RPM—60% P.F.—41.6 K.V.A.—with 120 volt DC excitation—direct connected. These units are complete with panel board and distribution. Price for both, with dead-front electric panel and distribution—\$4375.00. Will sell singly at \$2350.00 ea., with generator panel. Units recently removed from Navy ship and in good running condition.

20 KW—25 K.V.A. Buda generator set—Model 317—Buda 3 cyl.—radiator cooled—electric starting. GENERATOR: Century 20 KW—220 volts—3 phase—60 cycle—with direct connected exciter. Good used condition. \$1650.00.

(1) 125 K.V.A.—100 KW—450/3/60 1200 RPM—radiator and fan belt assembly. All set up on pre-fab sub-base. Engine model 36A5 $\frac{1}{2}$ AE—160 HP—1200 RPM—#82541—engine mfg. by Fairbanks-Morse. Electric starting. GENERATOR: F.M. 100 KW—450/3/60—1200 RPM—Frame J.F. 20 D—drip-proof construction—120 volt DC excitation. RECENTLY REMOVED FROM NAVY SHIP—good condition—\$4750.00.

(40) NEW AND TEST RUN ONLY—BUILT 1953
20 KW—120/208—3 phase 60 cycle 1800 RPM 4-wire ball-bearing E.M. generators with voltage regulator. Excitation 0.75 KW—62.5 volts—12 amps. ENGINE: Sheppard model 6D—4 $\frac{1}{2}$ X 5—3 cyl.—radiator cooled—212.8 cu. inch displacement—self-contained fuel tank—steel I-Beam base—12 volt heavy duty starter. Full generator rating 5000 to 8000 ft. Above 8000 ft., loss of 3% per 1000 ft. BARGAIN PRICE \$2095.00 EACH.

D.C. SETS

20 KW GM model 2-71—2 cyl.—heat exchanger cooled—120 volt DC—167 amps—stab. shunt Delco generator model 1-3609.

30 KW—120 volt DC—Sheppard model 12—6 cyl.—4 X 6—50 HP at 1200 RPM—continuous full load rating—radiator cooled—built to ABS & AIEE #45—class A insulation—electric starting. GENERATOR: 30 KW—120 volts DC—250 amps—shunt wound—40° rise.

10 KW Superior diesel driven generator set—TEST RUN ONLY—120 volts—83.5 amps—shunt wound Delco generator model 1-3672—ENGINE: Superior G.A.B.2—4 $\frac{1}{2}$ X 5 $\frac{1}{4}$ —16 HP at 1200 RPM—heat exchanger cooled. EQUAL TO NEW.

THE BOSTON METALS CO.

313 E. BALTIMORE STREET
Baltimore 2, Md., Lexington 9-1900

Index to Advertisers

The American Brass Co.....	8
W. A. Augur, Inc.....	48
The Boston Metals Co.....	51
Chris-Craft, Marine Engine Div....	33
Chrysler Corp., Marine Engine Div.....	2
Colorado Fuel & Iron Corp., Wickwire Spencer Steel Div....	11
Columbian Bronze Corp.....	49
Columbian Rope Co.....	1
The Coulter & McKenzie Machine Co.....	47
Cummins Engine Co., Inc.....	54
Dale Plastics Corp.....	46
Danforth Anchors.....	45
Diesel Corp. of N. J.....	49
Eldredge-McInnis, Inc.....	49
The Enterprise Mfg. Co.....	37
Harvey F. Gamage.....	31
Gladding-Hearn Shipbuilding Corp.....	40
Gulf Oil Corp.....	53
The Harris Co.....	52
Harris Electronics Corp.....	47
Geerd N. Hendel.....	52
Hunter Lindsay Diesel Co.....	52
Hyde Windlass Co.....	37
International Paint Co., Inc.....	38
Johnson Motors.....	10
Kiekhaefer Corporation.....	4
The Maxim Silencer Co.....	40
Wm. M. McClain, Inc.....	52
Michigan Wheel Co.....	45
Lucian Q. Moffitt, Inc.....	46
Morehead City Shipbuilding Corp.....	8
O. Mustad & Son.....	48
New Bedford Cordage Co.....	44
Nordberg Mfg. Co.....	30
Northill Co., Inc.....	32
H. O. Penn Machinery Co., Inc.....	43
Perkins-Milton Co., Inc.....	35
Pfueger Fishing Tackle.....	37
Radiomarine Corp. of America.....	41
E. S. Ritchie & Sons Inc.....	47
Dwight S. Simpson & Associates.....	52
Snow-Nabstedt Gear Corp.....	34
Sponge Products Div., B. F. Goodrich Co.....	7
Stroudsburg Engine Works.....	42
Surrette Storage Battery Co.....	47
A. J. Tower Co.....	42
Twin Disc Clutch Co.....	3
U. S. Rubber Co.....	39
Westerbeke Fishing Gear Co.....	52
Western Net Shop.....	49
White Diesel Engine Div., The White Motor Co.....	12
Wilfrid O. White & Sons, Inc.....	49
Wickwire Spencer Steel Div. of The Colorado Fuel & Iron Corp.....	11
C. A. Woolsey Paint & Color Co.....	48

CLASSIFIED ADVERTISING

Rates: \$1.00 per line, \$5.00 minimum charge. Count 9 words to a line. Closing date, 25th of month. National Fisherman, Goffstown, N. H.

FOR SALE

Cruisers, draggers, auxiliaries—all types and sizes. If you are in the market for anything in that line, please write us—no inquiry too small to merit attention. KNOX MARINE EXCHANGE, INC., CAMDEN, MAINE.

GOVERNMENT SURPLUS EQUIPMENT LIST

Buy surplus direct from Government at tremendous savings. Boats, motors, gear, machinery, power tools, truck, jeep, hundreds others. List \$1.00. Surplus Bulletin, Box 169NAE, East Hartford 8, Conn.

BOAT LIVERY FOR SALE

Owner retiring after 15 years operating one of the largest individually-owned boat and fishing businesses on the Great Lakes. Located at the mouth of the Saginaw River. Includes a 60 passenger cruiser, 50 mooring stalls to rent out, 20 rowboats, over 900 feet of dockage, a lunch-room out on the water, bait house, a 5-room residence on shore, a large workshop and miscellaneous tools and equipment. Write W. N. Mowat Realty Co., Bay City, Mich.

FISH TUG FOR SALE

Gill-net fish tug, 42' x 13', wood, 3-cylinder Kahlenberg Diesel engine, tug and all machinery in A-1 shape, \$3,000. John Le Clair, Le Clair Bros., Jacksonport, Wisc.

DRAGGER FOR SALE

Fully equipped dragger *Phyllis J.*, 110'x18'x7', built in 1942. Loran, depth sounder, new 150-watt radiotelephone. All fishing and scallop gear included. Boat now working. Call or write Neil Jacobs, 4 Fane Court, Brooklyn 29, N. Y. Telephone NI 8-5032.

PARTNER WANTED

Shipyard on Chesapeake Bay, 1000 ton railway. Want a partner working or silent. Excellent opportunity for young or middle-aged man. Write Box 58, NATIONAL FISHERMAN, Goffstown, N. H.

"ROSIE C." FOR SALE

Boat *Rosie C.*, 44 ft. dragger fully equipped and ready to fish. GM-Gray 165 hp. Radiotelephone. Price \$4500.00. Apply to A. Kelly, 62 Commercial Wharf, Boston, Mass.

CRUISER—\$3500

Marie, 42'7"x12', license 258760, built Thos. Young & Sons, Nov. 1949, used very little for pleasure fishing. Excellent Chrysler Crown, run 25 hours or less. Sleeps four, large toilet, strong and seaworthy. R. L. Harris, Onancock, Va.

AUXILIARY 32-VOLT GENERATORS

1.75 kw., 50 amps., 37.5 volts, marine type—mfg. by Westinghouse. Ball bearing, with heavy duty (150 amp. max.) reverse current relay and voltage regulator. Unused—excellent. Government cost \$800.00; your cost \$190.00 each, freight prepaid. Engine Parts Inc., 3729 N.W. 80th St., Miami, Fla.

BELT-DRIVEN GENERATORS

Auxiliary belt-driven generators, from 1 to 20 kw., all voltages. Other equipment for draggers. Write us your needs. Engine Parts Inc., 3729 N.W. 80th St., Miami, Fla.

EXCELLENT SURPLUS

GM DIESEL MARINE ENGINES WITH REVERSE GEAR

471 SERIES \$1750 F.O.B.

671 SERIES \$2700 F.O.B.

90 DAY GUARANTEE ON PARTS
INSPECTION INVITED

CAMSHAFTS FOR 671's AVAILABLE—\$15 Each

GRAY MARINE HEAT EXCHANGERS—\$55 Each

671 BLOWERS, Complete—\$150 Each

HUNTER LINDSAY DIESEL COMPANY

471 Tremont Avenue, Orange, New Jersey
Orange 5-1480 or Orange 5-8482

THE HARRIS COMPANY

PORTLAND, MAINE

Specializing in Fishing Boat Supplies

Marine Hardware — Dragging Equipment
Electronics — Fuel — Groceries

DWIGHT S. SIMPSON

AND ASSOCIATES

DESIGNERS OF FISHING VESSELS

Judith Lee Rose, Evelyn Brown, Edgartown,

Mother Frances and many others

COMMONWEALTH PIER

SO. BOSTON, MASS.

Commission Merchants and Wholesale Dealers in

ALL TYPES OF FROZEN SEAFOOD

WM. M. McCLAIN, INC.

231 S. FRONT ST. PHILADELPHIA, PA. 230 S. WATER ST.

GEERD N. HENDEL

NAVAL ARCHITECT

Designer of
Fishing and Commercial
Vessels of All Types

CAMDEN, MAINE

Specializing in
Aluminum Alloy Hull and
Deckhouse Construction

TELEPHONE 3097

BOATS FOR SALE

Commercial fishing craft, all sizes, types and conditions, for sale or charter. "A boat to suit your requirements." Edwin B. Athearn, Marine Broker, Box 727, Woods Hole, Mass. Tel. Falmouth, Mass. 2074.

ARMY "T" BOAT FOR SALE

Army "T" boat 65'x18'x6', very heavy wood construction, with 200 hp. Superior Diesel, 3:1 reduction. Two Diesel light plants. \$12,000. S. W. Ryniker, Jr., 506 Short St., New Orleans 18, La.

WESTERBEKE FISHING GEAR CO., INC.

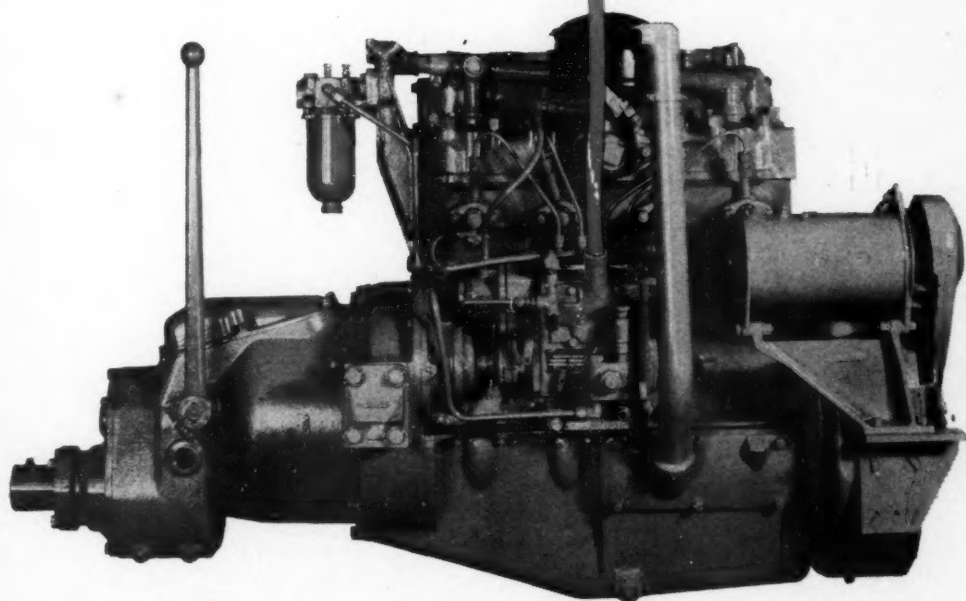
Grimsby Trawls
Wesco Cod-end Protectors
Wire and Manila ropes

— Distributors —
Boston 10, Mass.

Also store and warehouse Gloucester, Mass.

Marine Hardware
Danforth Anchors
Paints — Fittings

Pour savings into your engine
with **GULFPRIDE MARINE H.D.**



New GULFPRIDE MARINE H.D. provides all-round protection for both gasoline and diesel powered fishing boat engines never before possible! It delivers a new high in economy and dependability!

Here are three important reasons why:

► **ALCHLOR-PROCESSED**

Gulfpride Marine H.D. is super-refined by Gulf's exclusive Alchlor Process, which removes unstable elements left after normal refining. Thus it's better able to resist oxidation and the formation of sludge in the engine.

► **NATURAL BODY**

All the base stocks of Gulfpride Marine H.D. have natural body—don't depend on artificial thickeners which may break down in service.

► **PROPER DETERGENCY**

Gulfpride Marine H.D. has the ideal combination of the proper detergent additives, so that it holds deposit-forming matter in suspension until it can be removed when the oil is changed.

All these advantages add up to a tough filmed heavy duty oil that delivers benefits like these: a cleaner engine, less wear, greater economy, and greater dependability.

Get these benefits with your next oil change. Stop at your Gulf Marine Dealer and get a fill of Gulfpride Marine H.D.

**GULF OIL CORPORATION
GULF REFINING COMPANY**

1822 Gulf Building
Pittsburgh 30, Pa.



THE FINEST PETROLEUM PRODUCTS FOR ALL YOUR NEEDS



Cummins Diesel User Report



"...the fact that it had a Cummins Diesel influenced my decision to buy..."

William Bruce of Seattle specializes in salmon trolling and albacore fishing. He bought his 46-foot "Daybreak" in 1953. One of the big reasons he bought it was the 200 h.p. Cummins (model HMRS) installed

by the original owner. Here's what Mr. Bruce says: "I've found the Cummins easier to live with than other engines and very dependable. I like its lugging power and the fact that it operates good at the slower speeds (an important factor in my kind of fishing) without fouling up."

Cummins puts more profit in your fleet!

Cummins complete line of rugged, lightweight, high-speed marine diesels assures you of dependable performance and top economy. Here are some of the Cummins extras that save you money: Exclusive PT fuel system now standard on all Cummins Diesels gives thousands of trouble-free operating hours... and servicing, if any, is simple and easy. Cummins 4-cycle oper-

ation provides extra stamina on the toughest jobs... long engine life. Cummins Distributors are strategically located to offer you complete service facilities... genuine Cummins parts—wherever you are. See your nearest Cummins Distributor today for complete details on how a Cummins Diesel can add dollars to your profits.



**There's a
Cummins Marine Diesel
for every application...
60 to 600 horsepower.**

Bruc
to live
pend
e fact
peeds
shing

S